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Fourth Volume

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VESPASIAN'S GREAT GIFT TO POSTERITY: THE COLOSSEUM

In the depression between the Cælian and the Esquiline Hills of Rome rises the gaunt, majestic pile of the Colosseum. The building stands on the site of the "stagnum" or artificial lake excavated by Nero as a part of the grounds of his Golden House, and is supposed to have derived its name from a colossal statue of Nero which long stood beside it. Begun in A.D. 72 by the Emperor Vespasian, it was not entirely completed until the period of Domitian, but was dedicated by Titus in A.D. 80.

WONDERS OF THE PAST

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THE ROMANCE OF ANTIQUITY AND ITS SPLENDOURS

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J. A. HAMMERTON

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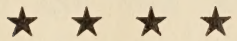

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Photos by F. Deaville Walker and by permission of the Director and Secretary of the Victoria and Albert Museum.

Wonders of the Past

THE ROYAL PALACES. VI

HADRIAN'S VILLA AT TIVOLI

By Thomas Ashby, D.Litt.

HADRIAN'S VILLA AT TIVOLI

By Thomas Ashby, D.Litt.

Director, British School at Rome

THE villa begun by the Emperor Hadrian, according to his biographer, on his return from his first journey to the East in A.D. 125, is situated about 15 miles to the east of Rome, just below the olive-clad slopes of Tivoli. Its appearance recalls to our minds very different associations from those which the word brings up in England, and even the great villas of the Renaissance must give place to its vast extent. The tourist who once ignorantly spoke of it as Hadrian's village was not so far wrong as he seemed to be. Situated on a plateau between two valleys, both of them bounded by cliffs of volcanic rock—the characteristic red tufa of the Campagna Romana—its ruins occupy an extent of about 600 yards by 300 though its gardens no doubt extended a good deal farther than the ruins.

It lies below the limestone hills, the first outlying spurs of the Apennines, through which the Anio forces its way, and is dominated entirely by Tivoli, the ancient city of Tibur, placed there to guard the pass into the mountains. The site does not seem at first to be an attractive one, and its unhealthiness in medieval and modern times has made the choice of it appear still more strange. But at a greater elevation sufficient space for these immense buildings and the gardens which surrounded them would not have been available, as we see in the villas nearer to Tivoli itself, most of which once occupied comparatively narrow terraces on the hillside, sometimes two or three one above the other. And the existence of many other smaller country houses in the neighbourhood proves that the emperor was not alone in

his choice. In fact, the whole Campagna from the hills to Rome must once have been a succession of country residences, large and small, with parks and gardens between them, presenting a very different aspect from the desolate appearance which until the last few years rendered its unhealthiness and its tragic loneliness proverbial.

Very little is known of the history of the villa. Its construction began in A.D. 125 and went on during the next ten years, during most of which time Hadrian was absent from Rome. On his return in 135 he retired there and continued to enlarge the villa, decorating it with works of art, until in 138 he was seized by the illness which caused his death. This, however, occurred at Baiæ, whither he had caused himself to be removed.

It is clear from the discovery of some imperial busts, the latest of which represents Heliogabalus (A.D. 218-222), that the villa continued to be inhabited by Hadrian's successors until that date at least, and there are indeed traces of work done there as late as the time of Diocletian, until when it was still known as the Palace of Hadrian. But after this we know nothing of its history for over a thousand years: that Totila took up his quarters there in A.D. 544 is a mere conjecture, unsupported by any evidence.

Earthquakes no doubt began the work of destruction, and then it shared in the general desolation of the Campagna. It is noteworthy that its works of art were not removed elsewhere in ancient times, and that its ruins were not made use of in the Middle Ages for habitation, but only as a quarry for building material. There are indubitable traces of the use of its marble decorations for burning into lime—fate of so much ancient marble.

Pope Pius II. visited it in 1461 and gives an account of it which shows that it was then in much the same condition as now: "Age has destroyed the form of everything; ivy now clothes the walls that were covered with tapestries and cloth of gold; thorns and brambles have grown where purple-clad tribunes sat, and snakes dwell in queen's chambers; so unstable is the nature of all things mortal."

With the Renaissance search began to be made for the rich series of art treasures which it contained. Some went to enrich the splendid villa, now itself in its decay one of the chief attrac-

Photo by Alinari.

GRASS-CARPETED AND INVADED NOW BY THORNS AND BRAMBLES: THE GREAT BATHS

South of the Small Baths of Hadrian's Villa and just north of the extremity of Canopus rise these stately roofs. In the height of their splendour these baths were decorated by particularly fine stucco work. As may be seen from the photograph, the side walls are partly executed in the well-known "opus reticulatum," a characteristic type of Roman masonry in which lozenge-shaped bricks are used instead of the common type. The heating arrangements in these baths are in a wonderful state of preservation.

Photo by Anderson.

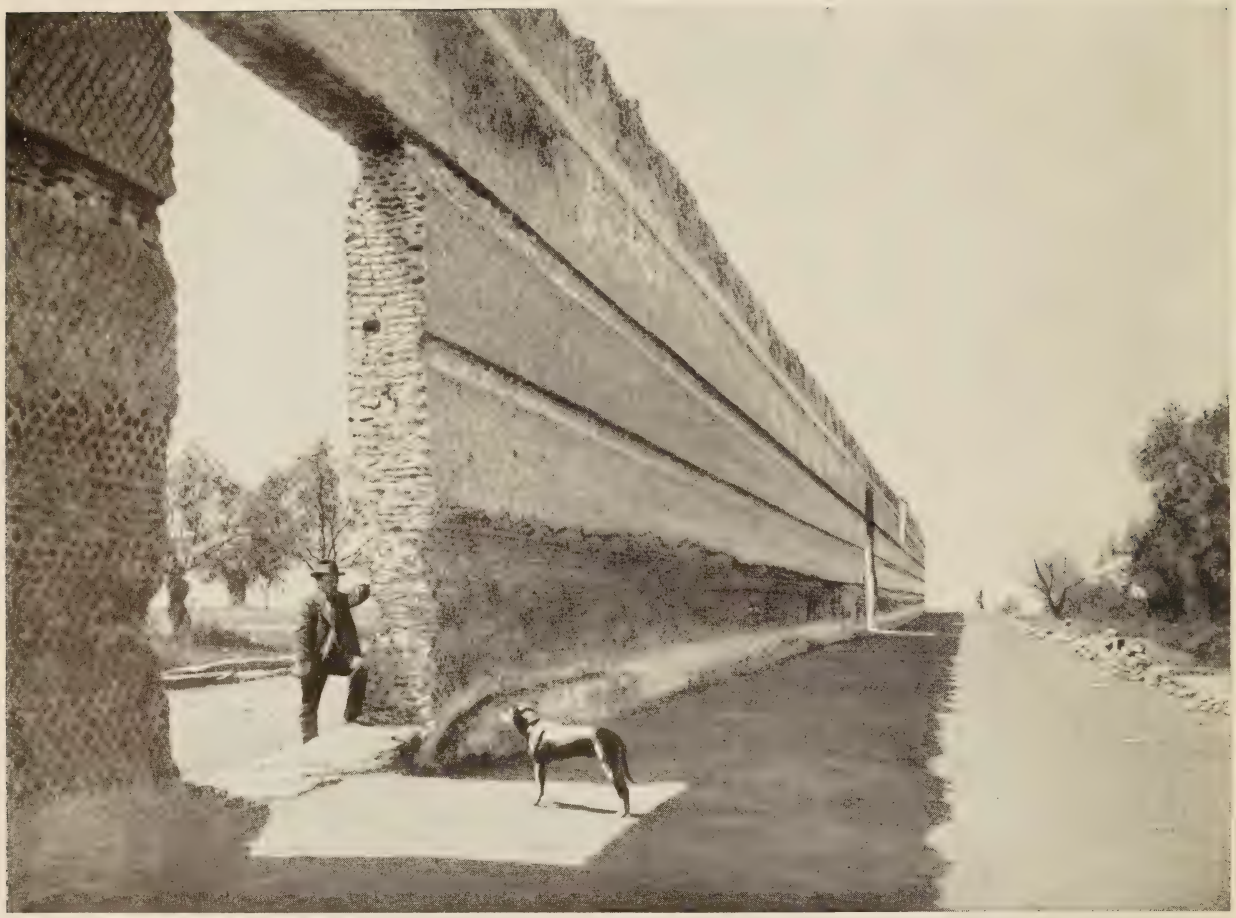
STAUNCH GIRDLING WALL AND IONIC COLUMNS OF THE "MARITIME THEATRE"

As is obvious in many of the prominent edifices that go to make up the wonderful complex known as Hadrian's Villa, the Emperor sought to reproduce in this, his country residence, the buildings and landscape effects by which he had been most impressed in the course of his foreign travels. Expert authorities are much at variance on the question of what this edifice might represent. Nibby affirms that it was a swimming-bath, and for that reason it is sometimes called the "Natatorium"; Professor Lanciani's opinion is that it was a place of seclusion where Hadrian, having closed the bridges over the canal that surrounded it, might retire to prosecute his studies; Dr. Ashby's theory that it was an aviary seems the most acceptable.

Photos by Alinari (top) and Dr. Ashby.

STATELY PLEASURE-DOME AND A SUITE OF GUEST CHAMBERS

Lofty and spacious, with reticulated walls formerly faced with marble, the great hall (upper photograph), sometimes called the "Hall of the Philosophers" and sometimes the "Temple of the Stoics," stands at the north-eastern extremity of the Poikile. On the north side of the Court of the Library is the "Hospitium" shown below. This complex consists of a central saloon with five chambers opening off it on both sides, each having three alcoves capable of containing a couch. The floor of the central saloon, as well as in the chambers themselves is of beautiful mosaic in black and white, still in perfect preservation.



BEAUTIFUL WALL RAISED BY ROMAN BRICKLAYERS

Undoubtedly remarkable in every building in the group of Hadrian's Villa is the fact that such unsurpassed beauty should be combined with strength and never lose by the fusion. One is particularly impressed by these mighty walls rising so high and towering in strength yet never devoid of grace—walls whose proportions may be determined by comparison with the figures of the man and his dog. What amount of time and how much labour went into their construction can be but faintly imagined.

tions of Tivoli, which Cardinal Ippolito d'Este began in 1551; though most of its decoration came from his collection formed in Rome. It was indeed the fashion to transport ancient sculptures from one house to another for decorative purposes, just as one might do with a particularly choice piece of furniture nowadays.

But the riches of the villa were anything but exhausted and excavations went on continually. Two beautiful candelabra were found in 1630 and works of art came to light at frequent intervals. Some of the best finds were made in the first half of the 18th century, including the famous mosaic of the doves and several portraits of Antinous, Hadrian's young favourite, one of the finest of which is in the Villa Albani at Rome.

Later on in the century (1769 and onwards) the Scotsman, Gavin Hamilton, made Hadrian's Villa one of the chief centres of his activity, which was unfortunately not scientific but confined to the recovery of ancient sculptures which he could dispose of to advantage to various British collectors; so that in this, as in other cases, he has left no proper record of the circumstances under which they were found. Here, however, the confusion was not due to Hamilton. According to his own account, which is confirmed by that of the engraver, Francesco Piranesi (brother of the more celebrated Giovanni Battista, the author of the famous "Vedute di Roma"), he was informed by his sculptor of the existence of numerous fragments round the lake called Pantanello, which he proceeded to have drained. This was an enterprise of some difficulty which had deterred previous searchers, but he carried it through with successful results. The marsh was found to be full of a vast number of trees intermixed with statues, etc., all of which have shared the same fate. They were probably treated in this way by over-zealous Christian iconoclasts as having once formed part of some wood or grove sacred to a pagan deity.

The sculptures which he discovered went in part to the Vatican, but in the main to the Earl of Shelburne, and these last are still at Lansdowne House. Others were dispersed among various collections. The total number of works of art discovered in the villa as far as we know is well over 250, but they are scattered all over the world in numerous public and private collections in

Rome, London, Berlin, Dresden, Stockholm, Petrograd. The excavations have by no means exhausted all the possibilities of discovery, and now that the greater part of the site is in the possession of the Italian Government, what is found in future will remain in its possession.

The villa, we are told, contained imitations of the famous buildings which Hadrian (who was one of the most travelled of Roman emperors) had seen and admired all over the known world; Hamilton mentions some of them, and attempts have been made by the antiquaries, and above all by Pirro Ligorio to whom most of the traditional appellations are due, to identify the ruins with the list of names given us—not always with success, or even with probability, for, as we shall see in the sequel, the only certain identification is that of the Canopus.

There is, however, a key to what seems a chaos of miscellaneous ruins jostling one another in picturesque confusion, and that is in the orientation of the various parts of the villa. If we follow the archæologists who take this as their guiding principle, we shall find that the whole falls naturally (leaving aside a number of outlying detached buildings such as the two theatres and the connecting links between the various portions) into four main divisions, each centring round a large open space or courtyard: the group of the Poikile, that of the main palace, that of the Canopus, and that of the "Academy," really a smaller palace.

Taking these in order, we first come to the so-called Poikile, now approached by a beautiful avenue of cypresses, which derives its modern name from having been identified with the "Stoa Poikile" (the vari-coloured portico) at Athens, so-called from the paintings with which its walls were decorated. Whether the name be correct or no, we certainly have here a huge garden of the formal type, once surrounded by a peristyle. Its shape is imitated from that of the hippodrome or stadium, a favourite one among Roman gardens. At its north-west corner is the so-called "Hall of the Philosophers."

The north wall is still standing to a considerable height, and was detached from the rest with a space at each end through which a chariot could pass. It was so arranged that one could walk or drive on one side or the other of it in the shade or the sun, according to the season, at any hour of the day. From an inscrip-

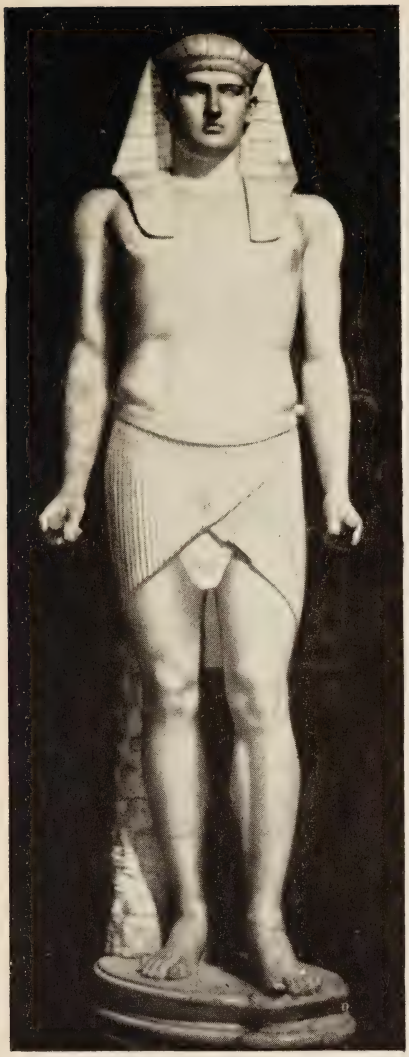


Photo by Alinari.

THE INSPIRATION OF EGYPT

Thought by some to represent the Egyptian Apollo, this statue, once a gem of Hadrian's pleasaunce by Tempe, now stands in the Vatican. More probably it is the Emperor's beloved protégé, Antinous.

Photo by Cesare Faraglia.

A PAGAN DEITY FROM HADRIAN'S VILLA

Hadrian's Villa, now denuded of its pristine glory although very impressive in its picturesque desolation, was once replete with every magnificence that the great Emperor could lavish on it. This centaur from the palace in the villa is now one of the treasures of the Capitoline Museum at Rome.

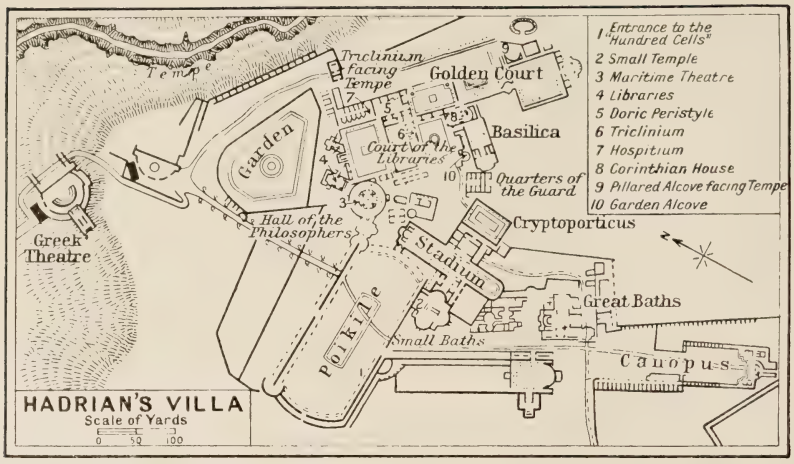


Photo by Cesare Faraglia.

MASTERPIECE OF AN ANCIENT ARTIST

Adorning a room in the Capitoline Museum, this exquisite mosaic was one of the numberless magnificent decorations with which the Emperor Hadrian garnished the halls of his villa. Consider the delicate execution of the disturbed water of the fountain basin and the beautifully natural birds with their variegated plumage perched on its rim.

tion, we learn that it bore the name of "Porticus Triumphi" (which it took from the building of that name in Rome), and that seven times its length was just over a mile. This was the length of the Roman "constitutional," and evidently the ancients liked to know the precise amount of ground they were covering, for other inscriptions of the kind have been found both in Rome and at Pompeii.

The central space was no doubt occupied by a formal garden with box and laurel hedges cut into fantastic shapes. We know them not only from a famous letter of Pliny the younger, but from the frescoes (and, in less degree, from the gardens themselves) of Pompeii, and from some of the few formal gardens of the Renaissance villas of Rome and its neighbourhood which have escaped the caprice of altering tastes.

In the centre of it is a large open tank of the same shape as the garden itself. From the western extremity a fine view of the desolate Campagna and of Rome itself—especially towards sunset—is to be had. This part of the garden is built out on an artificial terrace, and the arched substructures which support the main embanking wall were used to lodge the Imperial Guard, or slaves. The so-called "Barracks of the Vigiles" in another part of the villa should rather be considered to have been a storehouse, not only for food, but for furniture and other objects of occasional use.

The remainder of the group contains a very finely decorated room, which was probably used for a dining-room in summer, unfortunately much devastated by searchers after building material; it communicates with the so-called "stadium," perhaps simply another garden of that shape, which was a favourite one with the ancients. Beyond it on the east is a large courtyard with an open tank in the centre; under the colonnaded walk surrounding it is an underground passage, or cryptoporticus, to provide shelter from the rain or even from the Italian sun.

To the north-east of the first group lies the second, the Imperial Palace proper, which is grouped round four main courtyards of varying size. The first of these is known, quite wrongly, as the "Courtyard of the Libraries," because the Greek and Latin libraries have been thought to be recognisable in some lofty buildings of irregular plan and uncertain use on one side of it.

On another is the so-called "Maritime Theatre" which is probably not, as is often believed, the reproduction of an island with a temple upon it which Hadrian had seen in his travels, but simply an aviary. Its chief parts correspond with the description given by Varro, and a Renaissance reconstruction according to his description (the work of Pirro Ligorio—see above) shows this clearly. Originally it was approached by a swing bridge which was later renewed by a fixed one.

Between this building and the so-called Poikile is the great hall, wrongly called the "Hall of the Philosophers," which, from its orientation, belongs in reality to the first group. Close by is a set of baths, the only portion of the villa which has been excavated in the last few years; they have their arrangements for heating still remarkably well preserved.

At the opposite end of the courtyard is a building known as the "Hospitium," or guests' quarters, perhaps correctly, for here we have a number of small chambers, five on each side opening on to a central hall, each containing three niches for a bed. The mosaic pavements of the floors are exceptionally well preserved. Close by is a terrace overlooking the valley on the north-east which is generally identified with the Vale of Tempe, now planted with beautiful trees. Farther on to the south-east are other parts of the palace, specially interesting nowadays to the student of architecture, for many problems relating to the construction of the dome find here their first solution, and we may trace here the origin of some of the most important features in the great buildings of the period of Constantine.

The ordinary visitor, if he is lucky enough to be there in the late spring when there is no fear of frost or rain, will see some of the beautiful mosaic pavements with which the whole villa was once decorated, but he will have to trust to his imagination for the rest. For the concrete walls, faced in part with brickwork, in part with small blocks of volcanic stone, grey or brown, have lost the veneer of marble, painted plaster or stucco with which they were once entirely covered both inside and out. The columns that supported the roof of the peristyles, or decorated the interior of once splendid halls, have gone, and their place is only in some measure supplied by the grey-green olives which grow in most of the open spaces of the villa. In the spring, too,

Photos by Vasari.

THE SO-CALLED "PRÆTORIUM" AND A VIEW IN CANOPUS

Hadrian's reign may be fitly described as the happiest period in the annals of Rome; he fostered the arts and broadened his mind by travel abroad; his period was one of peace. Struck with the beauty of Canopus, a town beside the Nile, he essayed a reproduction of it in his villa, excavating an artificial valley and adorning it with a temple (lower photograph) at its southern extremity. The upper photograph shows the substructures at the north end of Canopus, called by some the "Prætorium," but certainly never used to house the Prætorian Guards, for the cells would seem always to have been damp and dark.

Photos by Anderson (top) and Alinari.

VAULTED HALLS OF HADRIAN'S COUNTRY SEAT

For many hundreds of years excavations have gone on at Hadrian's Villa; its wealth of decoration, plastic and mosaic, has been carried off to embellish houses and museums all over the world. That part of the grounds which is shown in the upper photograph being particularly rich in treasure has been called the "Golden Court"; the vaulted ruin shown in the background is the so-called "Temple of Castor." Of staunch brick, reticulated in the walls, and graceful with its beautifully arched roof formerly adorned with decorations in stucco is the large Central Hall of the Great Baths, in the lower photograph.

Photos by Alinari.

THE BARBERINI CANDELABRA FROM HADRIAN'S VILLA

In the Gallery of Statues in the Pio-Clementine Museum of the Vatican are these two ancient Roman candelabra, the largest and finest in existence. Each has on the pedestal three reliefs, the one on the left above having Mars (shown in photograph), Minerva and Venus, and the one on the right Juno, Jupiter (shown in photograph) and Mercury. They have been called "Barberini" from the family name of Pope Urbanus VIII., whose excavations at Tivoli in 1630, directed by Simone Bulgarini, brought them among a host of other precious objects to the light of day.

the brilliant colours of the mosaics are almost surpassed by the wild violets and purple anemones for which Hadrian's villa is famous.

The third group lies farther to the south, and consists of two separate groups of baths—the smaller of very elaborate plan, with rooms of various shapes cleverly fitted in, paved with many-coloured marbles. The larger is remarkable for having in one of its halls an exceptionally fine piece of ceiling decoration in stucco. The main feature of the group, however, is the Canopus, which took its name from a city fifteen miles from Alexandria on a canal branching off from the Nile, celebrated for a temple of Serapis. Hadrian constructed a reproduction of the canal and of the temple, excavating an artificial valley some 200 yards long, with a great niche at the end of it decorated with fountains. The works of art which adorned it were a mixture of pure Egyptian art and of imitations of the Roman period, and a considerable number of them have been found at different times. It is uncertain whether the fine statue of Antinous in Egyptian costume was found here or elsewhere in the villa. Close by is the fourth and last group—the so-called "Academy," which is in reality simply a smaller palace arranged round a courtyard. It was decorated with splendid works—the mosaic of the doves, the two Centaurs, the red marble Faun, all now in the Capitoline Museum.

Other more distant buildings need not now detain us. Some of them, though built at the same time as the villa, and included in its area by the older topographers, certainly form no integral part of it and probably belonged to other owners.

The hasty survey which we have taken of Hadrian's Villa may have served to give us some idea of one of the most splendid of the Imperial residences of ancient Rome. It has, as we have seen, surprisingly little history; and both for this reason and owing to the removal of the works of art with which it was decorated and the spoliation of much even of its architectural adornments, we may find it difficult to form a mental picture of what it was in the days of its splendour, short as they were.

Hadrian's restless spirit cannot have long found there the repose which it sought, and yet with no other individual can we connect it except with his favourite, the handsome youth Antin-

ous whose features are familiar to us from the many representations of him which have been found here. His death by drowning in the Nile in A.D. 130 moved Hadrian to a woman's tears, the more so perhaps, that though it may have been accidental, it was, according to another account, an act of sacrifice to avert some calamity that threatened Hadrian himself.

But the villa has no other historical associations, and it is perhaps the picturesque that will live longest in the memory, the beauty of its cypress avenues and olive groves, and of the grey and brown walls among them; and at sunset the words of the first humanist pope come back to us once more: "adeo fluxa est mortalium natura rerum"—"so unstable is the nature of all things mortal."

TEMPLES OF THE GODS. XV

THE GREEK TEMPLES OF PÆSTUM

By F. N. Pryce

THE GREEK TEMPLES OF PÆSTUM

By F. N. Pryce

Assistant, Department of Greek and Roman Antiquities, British Museum

SOUTH of Salerno the railway from Naples runs for miles through a monotonous coastal plain which not many years ago was a morass with muddy pools in which cattle wallowed, and tangled thickets where brigands made their lair. Today the swamps are being drained and cultivation is steadily encroaching on the waste lands, but the district still has an evil name for malaria and houses are few and far between. The train stops at the wayside station of Pesto, outside of which there are some massive walls and a gate through which we pass. A few yards farther and we are in the centre of the enclosure, and there opens before us a scene of majestic beauty the like of which the world can no longer show.

A great pentagon nearly three miles in circuit, set in the desolate plain between the sea and the mountains, surrounded by the broken wall of some vanished city, overgrown with weeds, overrun by lizards; not a sound save the beat of the wave on the sandy shore a field's breadth away; not a human being in sight save perhaps a peasant far away ploughing with a yoke of oxen. And in the midst of this great desolation, along with the sun, the wind and the sea, tower up the beautiful remains of three mighty temples.

The first temple we approach is also the finest and the best preserved; some writers have pronounced it the most imposing monument of Greek art that has been spared to us. At Girgenti in Sicily there is one temple in even more perfect preservation; at

Athens the buildings are of more beautiful material and show a more refined sense of proportion; but this sombre mass impresses us with a sense of grandeur and power such as no other Greek building can produce. The heavy austere lines, the dull red colour, the ponderous entablature, the utter lack of decoration, recall to us not the sunny grace of Hellas but the sombre and mysterious shrines of ancient Egypt.

The temple, which is nearly 200 feet long, is of the Doric order; the fluted columns taper up from platform to architrave without base or figured capital. The external colonnade is complete, of thirty-six columns, each 28 feet high and over 6 feet in diameter at the base. The material is travertine, a kind of limestone, which was originally covered with hard white stucco upon which polychrome decoration was laid, so that when new the temple appeared as a pile of snowy-white marble, relieved with blue and red and gold; but this covering has almost entirely disappeared, and the light-coloured limestone itself has been stained by centuries of rain and sun.

Internally, the building is less perfectly preserved: the roof has gone; the walls of the chamber are largely broken down; but the colonnades within the chamber still remain and above them may be seen the second row of columns which upheld the roof—an idea that later on developed into the clerestory of Gothic architecture. An examination of the proportions and details has led archæologists to suggest that the temple was built about the middle of the fifth century B.C., a few years earlier than the Parthenon at Athens.

In front of the temple is the basis of an altar of sacrifice 33 feet long, on which the victims were immolated in honour of the deity whose statue stood in the shrine. Can we identify the god or goddess once worshipped in this mighty pile? Its situation facing the sea, its massive build, its suggestion of unfathomable mystery, would make it no unfitting home for the God of the Sea, Poseidon. We shall see presently that the city which once stood here was Poseidon's own city; is it fanciful to suppose that its grandest and largest building would be reserved for the sea god's own particular habitation?

The second temple stands but a few yards away from the temple of Poseidon and to a certain extent suffers in effect from

Photo by Ewing Galloway.

TAPERING COLUMNS AND SHATTERED EAST PEDIMENT OF THE "TEMPLE OF CERES"

Built late in the sixth century B.C., the "Temple of Ceres" comes between the earlier "Basilica" and the later Temple of Poseidon in point of date. Like the other temples of Pæstum it still has comparatively intact its outer shell of columns and architrave; the west pediment, too, is complete and in situ, but only this fragment of the eastern one remains. It will be observed from this photograph that the travertine stonework has a supporting layer of brick masonry in the posterior aspect of the pediments. In front of the temple there formerly stood a sacrificial altar which was as broad as the temple front itself.

TEMPLE OF CERES, SMALLEST BUT NOT LEAST BEAUTIFUL SHRINE AT PÆSTUM

In glorious isolation, north of the Temple of Poseidon and beyond the Roman amphitheatre, stands this remarkable ruin. Like the great shrine of the sea god this temple also has six columns at each end, but with only thirteen flanking columns. Each column is 4 feet in diameter at the base and about 2 ¾ at the top, the tapering being thus very pronounced. The capitals are broad and flat and resemble those of the "Basilica" but are somewhat different in details of execution. Being only 105 feet long by 45 wide, the so-called "Temple of Ceres" is a comparatively small ruin, for the Temple of Poseidon measures 197 feet by 80.

THE "BASILICA," UNPRETENTIOUS NEIGHBOUR OF THE TEMPLE OF POSEIDON

Built earliest of all the Pæstum temples, the so-called "Basilica" displays much less beauty in its construction than the Temple of Poseidon, close to which it is situated. Its plan is unique, there being nine columns on the fronts and eighteen on the sides, with a line of columns running down the centre of the interior dividing it into parallel naves, which suggests that the building was the shrine of twin deities. The broad capitals rest on markedly tapering columns and there is a leaf decoration on the necking. In front of the east end of the shrine stood the great sacrificial altar, 70 feet long and 20 broad.

the proximity as it is less well preserved and less imposing in style. Its breadth, 80 feet, is about that of the largest temple, but it is considerably shorter and its columns measure only 21 feet in height by 4½ feet in lower diameter. The outer colonnade of fifty columns is complete, but only the architrave beams remain in position above them, and the interior has also suffered, only three shafts of the internal colonnade being now left. There are certain peculiarities to be observed about this building: on the short sides it has nine columns, whereas the normal Greek temple shows an even number—four, six, or eight. Also, the columns of the interior, instead of being ranged round the sides of the chamber, run in one rank up the centre, which makes it impossible that a temple statue of a deity could have stood in the usual place. In view of these facts, older writers assumed that the building was not a temple at all, but was used for some secular purpose, perhaps as a law court or Basilica, and this name will still be found in the guide-books.

But the edifice certainly was a temple, for excavations on this site a few years ago laid bare the foundations of the usual altar for sacrifice in front of it, in this case of huge size, being over 70 feet long. And the division of its chamber into two parallel naves by the central colonnade suggests that we have to deal with a temple in the service of twin divinities. The names of Demeter and Persephone at once leap to the mind, and it is not improbable that the mother and daughter goddesses of the earth had their sanctuary here side by side with the dwelling of the sea god, for we know that their cults were associated by the inhabitants of the city. With regard to date, older authorities considered the building to be posterior to the greater temple, but modern opinion tends to reverse this view and to regard the second temple as the earliest edifice on the site, dating from the middle of the sixth century B.C.

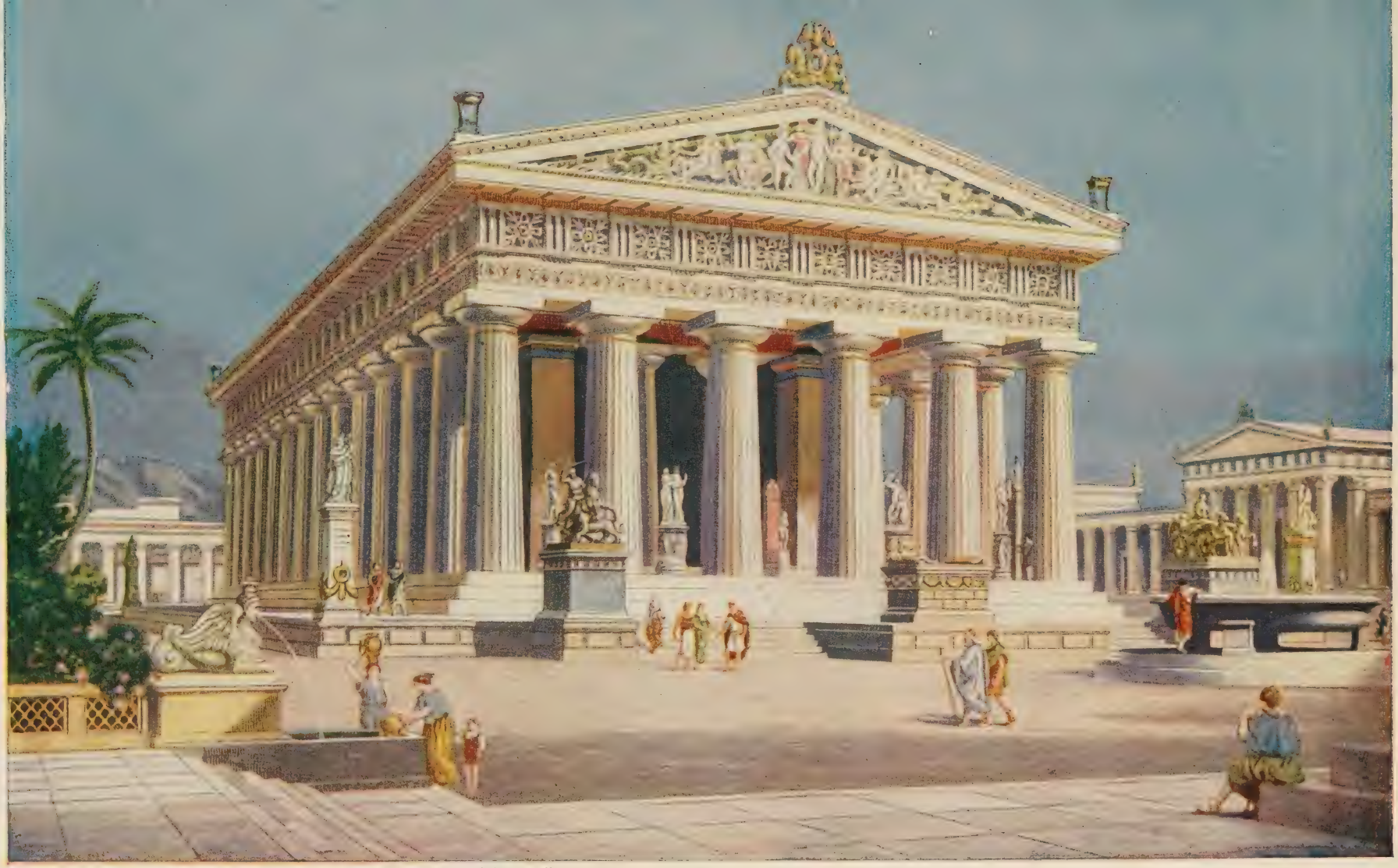
The third temple stands apart at some distance from the other two and is much smaller, being only 100 feet in length by 45 in breadth. In beauty, however, it is in no way inferior, and on any other site but this, where it is overshadowed by its colossal neighbours, it would rank as one of the most remarkable of surviving Greek buildings. Here again the outer colonnade is complete, of thirty-four columns, six at each end, each column

being 17 feet high. The architrave and large portions of the end gables are also preserved. It is believed to date from the last quarter of the sixth century B.C., being thus later than the "Basilica" and earlier than the great temple. It is popularly called the Temple of Ceres; what its real name was we cannot say.

The list of remains on the site is not exhausted; there is a fourth temple, of the Corinthian order, a theatre and an amphitheatre—all of the Roman period. Outside the city walls tombs have been opened containing weapons and fine frescoes, some of which are now in the Museum at Naples. But it is to the three Doric temples we have described that Pæstum owes its fame and the buildings of a later age may well be neglected.

What then was the city that stood here and what manner of men were they who set up these shrines? We know curiously little; there are the coins of the city, which are common in every numismatic collection and which rank among the most beautiful of all Greek coins; these testify to the wealth and artistic taste of the community, confirming the lesson the temples themselves teach us. But written history has preserved but little record of the human activity that once throbbed on the now desolate shore.

The city was founded about 600 B.C. The mighty Greek trading centre of Sybaris on the Gulf of Taranto, then at the height of that prosperity which has made its name a byword for effeminate luxury throughout the centuries, established it as a naval outpost and trading colony on the western coast of Italy. Some have thought that a native Italian town already occupied the site, but the new settlement was purely Greek and was placed under the protection of the Greek God of the Sea, Poseidon, and named after him, Poseidonia. After this we hear nothing of it for many years; we can only judge that it prospered exceedingly from the evidence of its buildings and its coins, and from the fact that it gave its name to the entire stretch of coast from Capri to the Cape of Licosa which we now call the Gulf of Salerno. In the fourth century B. C. trouble came. Italian tribes, descending from the mountains, stormed the city which for nearly two generations had to endure their supremacy. Every year, it is said, the Greek inhabitants met upon a certain festival day to



After a reconstruction by Bühlmann, specially coloured for "Wonders of the Past."

A PEERLESS SHRINE OF THE GREAT SEA GOD: POSEIDON'S TEMPLE AT PÆSTUM

One of the noblest examples of Greek architecture and a centre of religious life in the Sybarite colony of Poseidonia, this great Doric temple has an unquestionable beauty which makes it a formidable rival to the temple of Poseidon's divine rival, Athene Parthenos. Its thirty-six Doric columns rise 28 feet high and measure 6 ½ feet in diameter at the base and 4 ½ at the capital. In the interior of the cella stood two rows of seven columns to support the roof. Built throughout of travertine it was formerly entirely overlaid with white stucco on which polychrome decoration was lavished in brilliant blues and golds and reds. Glorious indeed was this temple in the days when Greek thought led the world.

WHERE THE HAND OF TIME HAS NOT LAIN HEAVY—

Nowhere, save on the Acropolis of Athens itself, can the simple majesty of Greek architecture be so strikingly apparent as at Pæstum, the ancient Lucanian city where the twice-blooming roses of Virgil's Georgics grew. First a stronghold of the Sybarites in the seventh century B.C. and called "Possidonia," after the sea god, the city flourished essentially Greek in manners, speech and architecture. Then, about 430, falling to the Lucanians, it began to lose the imprint of Hellas and the slow decline began. Finally, in the third century B.C.,

—THE BASILICA AND TEMPLE OF POSEIDON, PÆSTUM

now a colony of Rome, her degeneration was irretrievably established; the city was known even in Augustan days to be malarial and unhealthy. Utterly deserted for many centuries, practically all that can be seen to tell us of a glory that is gone are the ruins of the "Basilica," the Temple of Poseidon, and the so-called "Temple of Ceres." Perfect with tapering symmetries is the Temple of Poseidon, on the right.

bewail their captivity and to tell of the greatness of bygone times. In 330 B.C. the Greeks recaptured the city from the barbarians and it was probably then that the great walls we still see were built. But the old Greek stock in Southern Italy was exhausted; the Italians again seized the place, and in 273 B.C., when Rome got possession of it, the Greek inhabitants would appear to have been almost extinct. A Roman colony was established here under the name of Pæstum and the name of Poseidonia passed away out of use and even out of memory.

Even of the Roman foundation we read next to nothing. It is recorded by a historian to have distinguished itself by its unswerving loyalty to Rome in the terrible war against Hannibal. The poet Virgil speaks of the roses of Pæstum, which flowered twice, as if the gardens where they grew were the loveliest he knew. There are no rose-gardens now, and even in Virgil's time the place was doomed, for malaria, the scourge which some authorities hold to be the real cause of the downfall of the Roman Empire, was beginning to settle on the low-lying coastal plain. Some sort of settlement lingered on until the ninth century A.D., when, worn out by the constant struggle against disease and Saracen pirates, the inhabitants abandoned the site and fled inland to the safety of the hills.

Two centuries later the Norman, Robert Guiscard, tore down most of the Roman structures to obtain materials for his cathedral at Salerno, but the Greek buildings he spared, probably because their massive blocks were too cumbersome to move, and the temples were left in a silence which remained unbroken for more than six hundred years. It is one of the most curious facts in the history of archæology that these enormous ruins, less than twenty-five miles from the learned city of Salerno, and less than four miles from Capuccio, another episcopal city, remained entirely unknown all through the Middle Ages and the Renaissance. It was not until about 1740 that they were re-discovered. Throughout the intervening centuries there is no record that they were ever seen by human eye. Even now, when the marshes are being reclaimed, the impression we carry away from them is one of isolation and brooding solitude. The city's greatness was due to commerce, and the shelving open shore on which the ancient merchants could so conveniently beach their light

galleys is useless for modern shipping. The malaria may be subdued and the roses may once again bloom along the shore, but the throbbing life of a crowded commercial city will never more return.

GREECE IN ITALY: THE SYBARITE TEMPLE OF POSEIDON AT PÆSTUM

In excellence of preservation the Sicilian Temple of Concord at Girgenti surpasses the ruin shown above, and the buildings of ancient Athens have a grace and lightness not found here, but one cannot but be deeply impressed by the sense of uncompromising power which emanates from the massive columns and unadorned masonry of this ruin. Built of travertine limestone, with six columns at either end and a flanking colonnade of fourteen Doric columns on both sides enclosing the cella, the temple thus follows the Greek canon of proportion.

THE WONDER CITIES. XX

CORINTH: THE WANTON CITY

By J. A. Hammerton

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By J. A. Hammerton

MISTRESS of the two seas and of the highway between northern and southern Greece, Corinth shone above the blue waters of the great gulf in a climbing splendour of silver and green foliage, tawny fanes and colonnades. Framing her fortressed western port of Lechaion were argent olive orchards, gardens and vineyards. There, running from the sea plain, her white limestone ramparts narrowed into a long neck, and then spread outward and upward about the glistening city on a mountain slope, and finally reached round the precipices of the temple-crowned peak of Acro-Corinth.

If Corinth was a fine picture from the sea, the world of Hellas was a beautiful panorama from her citadel. Northward over the Corinthian gulf stood the majestic mass of Parnassus, wrapped in its mantle of snow till late in the spring. The west was enclosed with the white-peaked range of Arcadia, the south with the bleak mountain wall of Argolis. Eastward, over the island-strewn Saronic gulf, the rival city of Athens lifted her Parthenon dimly against a misty blue crescent of hills. Nearer at hand, in the same direction, lay the source of Corinth's splendour, that little neck of land linking southern and northern Greece and dividing the Adriatic waters from the sea of Asia with all its water-borne wealth.

Down the broad way between the ports, and along the heavily paved Isthmus road three and a half miles long, traffic of an extraordinary variety was borne. Beside the trains of wagons bringing from the eastern port island wines and Black Sea wheat, and the pack mules laden with Orient fabrics and Attic

marbles, streamed an opposite current from the western port carrying Italian and Sicilian products, as well as Corinth's own fine jewelry, pottery and statues in bronze. Yet both these rivers of Isthmus commerce were of no remark compared with the spectacle of ox teams and gangs of men engaged in rolling ships overland from one sea to the other. In those days there was scarcely need of a canal through the Isthmus. Merchant ships were generally about the size of fishing smacks, and so easily beached that it was not difficult to "roller" them along a well-made tramway-like road from shore to shore.

Thanks to their strain of Phœnician blood, the Corinthians had close business connexions with Tyre and soon rivalled her in shipbuilding. For centuries they dominated the rest of Greece in marine power, and by their invention about 700 B.C. of the 9-knot war galley, the trireme, they became for a time warship builders to friendly states, and masters of the sea. It was by intellectual rather than by material power that the Athenians eventually surpassed them. They devised a system of real naval tactics in place of the Corinthian-Phœnician military method of grappling ship to ship and fighting with archers and boarding spearmen. The Athenian way was to leave the battle to helmsmen and rowers, who turned their large warships with bronze rams into missiles, and by skilful manœuvring crashed into the sterns or sides of hostile ships, often first crippling them by sheering swiftly through their ranks of oars.

In spite of their claim to have originated Greek tragedy, loosely based on the fact that a wandering Lesbian poet gave some choral performances in their market-place, the Corinthians were best at making technical improvements upon the original achievements of other men. They were perhaps the one race in contending Greece that thoroughly disliked warfare, loved mechanical industry and honoured common craftsmen, an attitude of mind that fitted their strong business sense.

Life in Corinth must have been happy in a good sense, and it was probably "gay" in a bad one. Its long untroubled prosperity was due to the fairness and respect with which the working class were treated under both aristocratic and tyrannical rule. The voluptuous gaiety of Corinth that made her name a byword in Greece sprang from the Semitic character of the goddess of love,

Photo by Underwood Press Service.

AGE-OLD WELL BENEATH THE ACROPOLIS OF CORINTH

Slight as are the remains of ancient Corinth, and buried for the most part beneath ruins of the Roman period, certain spots were too bound up with old tradition to be obliterated—such as the city-fountain Peirene in the foreground that still supplies Corinth with water in spite of five successive building periods which may be distinguished on the site; the apses were added by Herodes Atticus. The shallow steps behind are the beginning of a road to Lechaion, while the remains of an ancient temple crown the Acropolis hill.

SITE OF CORINTH, RICHEST CITY OF ANCIENT GREECE

Spread out on the level ground beneath the frowning height of Acro-Corinth, the ancient city early acquired a flourishing trade by virtue of her situation commanding the Isthmus; midway at once between northern and southern Greece and between the western and the eastern seas—the Gulf of Corinth and the Gulf of Ægina—she was in a fair position to control all the commerce of the region, and the wealth thus gained she supplemented by the far famed manufactures of her own workshops—jewelry, bronze and woven stuffs. In the centre here rise the seven columns which until recent excavations were all that marked the site.

TIME-SCARRED REMNANTS OF CORINTH'S TEMPLE TO APOLLO

In a dominating position on the temple hill are still standing seven monolithic columns of an ancient fane with portions of their entablature; their early Doric style, and the closeness with which they are set together, enable us to date the temple in the seventh century B.C. Each column is nearly 24 feet high and 6 feet wide at the base, and has twenty flutes; and inspection of the foundations has shown that there were fifteen to a side and six at each end.

Photo by Underwood Press Service.

WHERE ATHENE BRIDLED PEGASUS FOR BELLEROPHON

Craft of many builders has gone to the adornment of old Peirene, legend haunted water-spring of Corinth fed by another Peirene higher up the hill. The original Greek well-house consisted of six chambers partly hewn in the rock and divided by walls, but to these was added in Roman times a two-storeyed façade of arches, still later faced with marble; Roman, too, is the open-air tank to which water was led from the chambers. And in Byzantine times a rude portico of Corinthian columns was built of older materials in front of the arches; these features can all be traced above.

Photo by the Autotype Co.

PILLARS OF APOLLO'S FANE BENEATH THE FROWNING CLIFFS OF ACRO-CORINTH

"Korinthos" is not Greek in form, and it is probable that it belonged as a place-name to the commanding rocky bluff of Acro-Corinth (Akrokorinthos) in pre-Mycenæan times before ever a city grew up beneath its shelter and was called after it. On its summit, now girt with triple lines of mediæval fortifications, once stood a famous Temple of Aphrodite, goddess whose sensual sway determined the character of the city through prosperity and destruction and prosperity again for a thousand years and more; now only a few blocks remain, of doubtful identification. But a wonderful view is still obtained thence, from the bare ridges that bound the Argolid in the south to the tumbled ranges of Ætolia in the far north.

whose noble Doric fane in the citadel was one of the finest monuments of early Grecian architecture. But there was little that was pure about the rites of this Astarte, who in name and appearance had been made an armed Aphrodite and who was said to be served by a thousand courtesans whose numbers were increased when the city was in peril. In a lower suburb, the Kraneion, there stood a sacred cypress-grove containing a temple to the Black Venus, and, hard by, a cynical monument to the notorious Lais, represented by a lioness holding in her claws a stricken ram—the haunt of the voluptuary and the vicious. Those same Phœnician abominations that infected the soul of Israel corrupted the character of the Corinthians. But they were saved, in the historic period at least, from the dreadful kind of human sacrifice attached to their other Punic idol, the fire-god Melkart, who, softened into a kindly deity, had a temple that was one of the sights of the Isthmus. He was not the most popular male divinity in this centre of seamen merchants; Poseidon, the Lord of the Sea, whose glorious sanctuary also rose by the eastern end of the Isthmus fortifications, was the favourite god. In his honour was held every two years the famous national festival of the Isthmian games, with athletic contests, chariot-racing and naval display, that attracted multitudes of Athenians and other Greeks, contributed to the spirit of Hellenic unity and helped to glorify herself.

The strict Spartans, though for long connected by foreign policy with the Corinthians, seldom sent their young men to compete at the Isthmus. They kept their finest warriors remote from the city of the Black Venus; but later, when subtle Corinth, having employed Sparta to crush Athens, used Thebes to weaken Sparta and so laid Hellas open to the Macedonians, Alexander the Great selected the stadium of the Isthmus games to announce himself as leader of Hellas and explain his design of invading Persia. Here likewise the Roman afterwards proclaimed the independence of the Greek states. To Corinth, under Macedonian rule, the opening up of Persia and Babylonia brought more trade. Her freemen, numbering from 12,000 to 20,000, were then reported to possess some 460,000 slaves. Most of these appear to have been employed in Tyrian fashion in the factory production of trinkets, table vessels of fine metal, bronze castings

of statues and exquisitely dyed fabrics. The destruction of Tyre by the Macedonians was a great gain to her. Her novel style of late Corinthian architecture, the motif of which was devised by the architect Kallimachos on seeing an acanthus plant twined about a basket, took the Macedonian taste, and was spread by them from the Nile to the Tigris and into Central Asia. It was really only a florid modification of the Ionic, derived from the Egyptian palm-leaf capital, and was not favoured by classic Hellenic taste, but it captured the more barbaric minds of both Macedonian and Roman.

The Corinthian was highly practised in the business of commercialising art. He was expert in standardising Grecian things, as the Phœnician founders of his city had been in popularising the original work of Egyptian and Cretan artists. "Corinthian" as an adjective descriptive of artistic quality acquired a meaning very different from that of "Attic." However, the quality it indicated pleased the taste of an enormous new public of rich semi-barbarians, so the Corinthian manufacturers and merchant shippers greatly increased in wealth. Then it was that the voluptuous luxury of the city became proverbial. "It is not everyone," ran a Roman saying, "that can afford to go to Corinth." Foreign merchant shippers who did not keep control of themselves in this brilliant whirlpool of carnality were apt to lose both their freight and their ship.

When to the wealth of Corinth there was added the pride of a recovered independence in the decline of the Macedonian power, the most decadent of cities strangely put on an imposing air of warlike power. Brought by capture into the Achæan league in 243 B.C., she left most of the fighting to her more valorous allies, but became, by reason of her financial strength, the most important member of the confederacy that wasted in social wars of Greek against Greek the last remnants of Hellenic vitality. When the Romans, having finished Carthage, turned to the easy conquest of Greece, the Corinthians welcomed them at first, and then, madly over-estimating their strength, led the broken league to battle. What followed was one of the great tragedies of history. The last Greek army was not so much fought as hunted. After being overtaken and half-annihilated by Metellus, it was driven to bay at Corinth, where in 146 B.C. a second Roman force

Photo by the Aumrye Co., specially coloured for "Wonders of the Past."

SHRINE OF CORINTHIAN APOLLO IN THE WANTON CITY ADMONISHED OF S. PAUL

"Not every man has the fortune to go to Corinth"—not every man could afford it! Such was the verdict of the Roman world on the most luxurious city of the age. When Rome learned to meddle in the affairs of Greece she was at the height of her prosperity, was even playing a dominant military rôle quite foreign to her nature, and had acquired a lurid repute for gaiety and unbridled license fostered by the worship of Astarte-Aphrodite. And even when Corinth was rebuilt by Julius Cæsar, a hundred years after the sack of Lucius Mummius, it was not long before the old wealth—and the old ways of life—returned. But now the only stones above ground remaining mark the Temple of Apollo, patron of earlier and less tarnished morals.

under a rough soldier, Lucius Mummius, smashed and scattered it.

Entering the city, he used it as Scipio, in the same year, used Carthage. Every remaining male was put to the sword, and the women and children were sold as slaves. All the treasures, including perhaps the largest of all collections of masterpieces of art, were sent to Italy. It must be said of Mummius that he did not take one statue or picture for himself. All were handed over to the State. On the other hand such was this Roman's ignorance that he is said to have bound the shipmasters who conveyed them to Rome to replace by a new work any of the masterpieces that might be lost on the voyage!

Mummius did not despoil and level Corinth to the ground on his own authority. He acted on the orders of the Senate. Fierce old Cato, prophet of the simple, moral life and declaimer against the enfeebling luxury of decadent Greece, had recently died, and his influence was still strong upon the Romans. The fact that the interests of the Roman commerical party, eager to destroy a rival, coincided with the desire of the party of moral reform decided the fate of the wanton city.

The destruction of Corinth did not save the Roman oligarchy from moral rottenness. It was the greed of money that had been incarnate in old Cato himself which corrupted the Roman character, and the nobler genius of the best classic Greeks was required as an antiseptic against the decay of national strength. So soon as a general reconciliation was effected, in the age when Lucretius, Cicero, and Horace were steeping their minds in the spirit of Hellas, Julius Cæsar rebuilt and repeopled Corinth. The site, desolate for a hundred years, had then acquired a new military importance. Through the Isthmus ran the shortest, safest route to the Dardanelles and the Black Sea, whose wealth of wheat, so necessary to growing Rome, was held up by Armenians and Parthians, who also menaced Asia Minor. Cæsar and some of his successors thought of digging a canal through the neck of land, but, stopped by the expense of cutting through rock, left the work unfinished, only to be carried out in the nineteenth century.

New Corinth prospered like the old city, and though peopled by a medley of foreign freed slaves resumed the foul worship of

the Black Venus. It was again the most splendid commercial centre of Greece and a sink of iniquity when S. Paul founded a religious community there. In the crash of the Græco-Roman civilisation it slowly decayed, and by curious chance all its later florid architecture has vanished, leaving only a few columns of an early Doric temple, thought to be that of Apollo, standing in the lower city amid the general weed-grown chaos of fallen stones.

ONE OF THE MAIN APPROACHES TO THE OLD CORINTHIAN MARKET-PLACE

Here we are looking up the old porch-lined street that led from the Corinthian Agora to Lechaion—Peirene accordingly is in the mass of ruins to the left—the curved wall of its northern apse may be distinguished—while the Temple of Apollo is out of sight on the opposite side. At the end of the street lay the Agora or market-place with its buildings, while over all still looms the vast bulk of Acro-Corinth, whose summit afforded a view that even the ancients marvelled at, though not prone to praise natural beauties.

RECORDS OF THE TOMBS. VII

ALGERIA'S AMAZING TOMBS

THE MEDRASSEN AND THE TOMBEAU DE LA CHRETIENNE

By A. MacCallum Scott

ALGERIA'S AMAZING TOMBS

THE MEDRASSEN AND THE TOMBEAU DE LA CHRÉTIENNE

By A. MacCallum Scott

Author of "Barbary: the Romance of the Near East"

AMONG the ancient monuments that make North Africa so rich in archæological interest there is none more impressive than the two immense Algerian structures known as the Tombeau de la Chrétienne and the Medrassen, both standing in peculiarly imposing positions widely distant from each other in Algeria. Little has been written concerning these very remarkable memorials of a distant past; in English works of travel, especially, readers will have difficulty in finding references to them. We are peculiarly fortunate in being able to include the fine photographs of these monuments taken recently by the French Colonial Government authorities at the suggestion of the Editor's friend, Mr. W. H. Miller of Algiers, whose knowledge of the remains in Africa is very extensive, and under whose guidance the Editor first made acquaintance with these astonishing monuments.

—Editor.

ABOUT fifty miles west of Algiers, on the summit of one of a low range of hills overlooking the Barbary coast and the blue Mediterranean, the traveller by sea or land beholds a strange and unexpected edifice. Far from the Nile, it nevertheless, by its shape and by its colossal proportions, recalls the pyramids. In the distance it seems half-pyramid, half-tower, an African Tower of Babel, a hill piled by man upon a hill. It has stood sentinel there for 2,000 years.

This strange Egyptian shape overlooking the Barbary coast is known to the French as the "Tombeau de la Chrétienne," the Tomb of the Christian Woman. The Arabs call it "Kubr-er-Roumia." To the Arab the Christian is still "Roumi," the Roman, whom his ancestors from the desert dispossessed. The French title is therefore simply a translation of the native name

in common use. There is evidence, however, that this structure was contemporary with the origin of Christianity itself, and that it is to be associated not with the name of any Christian woman, but with that of Selene Cleopatra, the daughter whom Cleopatra, Queen of Egypt, bore to Antony.

In the first place there is documentary evidence. Pomponius Mela was a Latin author who flourished early in the first century. In his work, "De Situ Orbis," written before the middle of that century, he refers to this tomb as "Monumentum Commune Regiæ Gentis," the Public Memorial of the Royal Family, the tomb of the native Kings of Mauretania.

Dr. Judas, an Oriental scholar, has pointed out that the native name, Kubr-er-Roumia, is not of Arab but of Phœnician origin. In the old Phœnician or Punic language, which survived for centuries after Roman times all along this coast, "Roumiah" means "Royal," and from the similarity of the name to the Arab word, and a false derivation, the legend of the Christian Woman was evolved. Colour was given to the legend by the fact that on the four blind stone doors of the monument the panelling made the Sign of the Cross.

Not far from Constantine, the most ancient capital of the native Berber princes, is to be found another structure known as the Medrassen, so similar to the "Tombeau" as to make it certain that one has suggested the other. This building, on which the Egyptian characteristics are even more plainly marked, was erected about 150 B.C. by Massinissa, the native ally of the Romans against Carthage, to be the sepulchre of his dynasty. What more natural than that his great-great-grandson Juba, when established in a new kingdom on the western frontier, should build near the new capital a sepulchre like that of his fathers?

The story of Juba II. is one of the most romantic episodes in African history and it has one curious link with the Bible narrative, for his daughter Drusilla was the wife of Felix, Governor of Judea, upon whom the Apostle Paul's preaching produced so powerful an effect. His father, Juba I., King of Numidia, had rashly taken the side of Pompey in the Roman Civil War, and had been crushed by Julius Cæsar, his kingdom being incorporated in the Empire. The boy, Juba II., was taken

THE MASSIVE PILE OF THE TOMBEAU DE LA CHRÉTIENNE AS IT IS AFTER 2,000 YEARS

From a comparison of its height with that of the large bell-tent in the foreground, or with the figure of the man seen standing among the debris of boulders on the right, a rough idea of the size of this great monument may be gathered. Its drum-like base stands on a square foundation and is about 36 feet high and 200 feet in diameter. The conical upper portion is 75 feet in height, thus making the total height of the tomb about 110 feet.

VICTIM OF TOMB ROBBERS AND TREASURE SEEKERS: THE TOMBEAU DE LA CHRÉTIENNE

Since its erection about 2,000 years ago the tomb of Juba II. has undergone innumerable assaults, first at the hands of tomb robbers, and then from the Arabs, who firmly believed the tradition of its concealed wealth. The very solidity of its structure must have baffled them, but that some unknown band of robbers did penetrate to the sepulchral chamber was definitely discovered in 1885 when MM. Berbrugger and MacCarthy bored their shaft to the inner cavity to find only empty caskets, and the broken bead-strings of Selene Cleopatra, lying on the floor.

THE MEDRASSEN: TOMB OF MASSINISSA, AND PROTOTYPE OF THE TOMBEAU

Massinissa was an ally of Rome in her final victorious campaign against Carthage, and because of this, succeeded in preserving intact his throne and his frontiers. This great mausoleum which contained his remains was built as a solid conical pile of tufa-stone blocks each several feet square, and had a secret entrance, with funerary chamber in the centre. From Egypt, land of the great pyramids of the Pharaohs, must have come the inspiration for the erection of this tomb. Through time the legend arose that it was a repository of fabulous treasure and many were the attempts to rifle it, but all of them unsuccessful. The break in the symmetry of the structure, shown above, marks the point where a forced entrance was essayed by bombardment by French artillery about the middle of last century.

a prisoner to Rome, and there, instead of suffering the miserable fate of so many other captive princes, he found an education, a fortune, a wife and a kingdom.

Augustus, the new Cæsar, took a fancy to the little captive and marked him out as a pawn in his great schemes. He placed him in charge of his sister Octavia, the widow of Antony, and in her family he became familiar with all that was best in the literature, art and philosophy of Rome and Greece. Octavia had also taken another little refugee into her home, Selene Cleopatra, the daughter of her own fickle husband and Cleopatra of Egypt. When the children became of age, Augustus, in pursuit of his subtle policy, arranged a marriage between them, and established Juba as king of the dependent native state of Mauretania on the western frontier of his African province.

The experiment was a triumphant success. Juba and his queen had a long and prosperous reign. They established their capital at the little Phœnician town of Jol, about 70 miles west of Algiers, and rechristened it Cæsarea in honour of their Imperial patron. It is now known by the Arab name of Cherchel. The city grew rapidly in wealth and splendour. Architects, sculptors, painters, writers, teachers, thronged to the Court of Juba and Selene from the best schools of Athens, Rome and Alexandria. Within the walls a theatre was built, and a hippodrome, and luxurious baths, and palaces and temples resplendent with marble pillars and statues. The colossal ruins of the aqueduct (see illustration facing page 574) which brought the water of the distant hills may still be seen striding across a valley seven miles away. Cæsarea became known as the Athens of the west. All has perished. The looted pillars adorn many an Arab mosque, and some relics of statuary and mosaic may be found in the museums of Algiers and Paris. Corn and vines grow upon the site. For miles around the ploughshare turns up in every field fragments of statues, columns, capitals, inscribed stones and exquisitely carved marbles. What treasures still lie underground we can but guess.

Before his death Juba caused to be built on the coast hills, about twenty miles east of his capital, a mausoleum which would be worthy of the new African dynasty he hoped to found. Taking the ancestral Medrassen as a model he built on a larger and more

massive scale, challenging comparison with the pyramids of the Nile. He was crowned in the year 26 B.C., and he reigned forty-five years. And here, in the recesses of this mountain of stone, he and his queen would be buried, with a magnificence befitting the glories of their lineage and of their reign, and the traditions of the tombs of Egypt.

For nearly two thousand years the legend of buried treasure attached to the tomb and many were the efforts made to wrest it from its rocky strong-room. But the clue to the entrance had been lost, and generation after generation of would-be plunderers expended their strength in vain in trying to force the secret. Battered and torn, scarred and defaced, its huge bulk still preserved the ancient pyramidal outline, and served as a beacon over sea and land. Soil settled on it, and seeds were dropped by wind and by birds, so that, at a near view, it was shaggy like the hillside with herbs and plants. A French botanist has even published a pamphlet on the flora of the "Tombeau." A rank growth of legend as well as of plants clings to the monument.

The Arabs believed that the "Kubr-er-Roumia" was guarded by spirits in the shape of black, poisonous wasps whose sting was certain death. This myth took various forms. According to one legend a certain Ben-Kassem, having been taken prisoner by the Christians, was sold as a slave in Spain to an old scholar who was an adept in magic. His master gave him his freedom on his promising to return to his home near the "Tombeau de la Chrétienne," and on the fourth day after his arrival to carry out certain instructions. He was to burn a scroll of paper at the tomb and to go away immediately. No sooner had the liberated slave burned the paper than the tomb opened, and a stream of gold and silver pieces issued forth and flew over sea towards Spain. Overcome by cupidity, Ben-Kassem spread out his burnous and tried to stop some of the flying treasure. The spell was broken, the stream of money stopped, and the tomb closed fast again.

News of this extraordinary adventure was carried to the pasha, who resolved to demolish the tomb and find what remained of the treasure. But no sooner did the workmen lay hands on the stones than the figure of a woman appeared on the top, shouting "Alloula! Alloula! Come to my help!" Alloula was the

NORTH AFRICAN EVOLUTION OF THE PYRAMIDS OF THE PHARAOHS, THE MEDRASSEN

In 204 B.C., with the help of Scipio Africanus, Massinissa razed Cirta, capital of King Syphax, to the ground, and carried off Syphax's wife, Sophonisba. Her father, Hasdrubal of Carthage, had thought to gain a more powerful ally to his cause by giving her in marriage to Syphax, although she had previously been betrothed to Massinissa. After defeating Syphax, Massinissa naturally wished to marry Sophonisba, but Scipio, fearing her power, refused to allow this, and she died through drinking a cup of poison sent to her by Massinissa. In 148 B.C., at the age of ninety, Massinissa died, just after having erected this great monument as the burying-place for himself and his successors—an expectation which was never realised.

EXCAVATIONS IN A TOMB TWENTY CENTURIES OLD

In this photograph may be seen the remains of five Ionic columns and one of the "blind" doors. All told, there were sixty such columns round the immense drum, and at the four cardinal points of the compass were four of these false doors having on their surface a large cross, one of which is plainly visible here. Above the drum were a frieze and a cornice and then the uppermost cone. Notice the deep indentation made by the excavators in the solid mass of the upper part.

name of a small lake at the foot of the hill. Immediately a swarm of virulent mosquitoes issued from the lake and drove away the desecrators of the tomb in headlong flight.

In 1855 the Emperor Napoleon commissioned two well-known Algerian antiquaries, M. Berbrugger and M. MacCarthy, to carry out a complete exploration of the monument. Although they had at their command all the resources of science, it took them seven months to force an entrance.

The monument, which is circular in form, stands upon a square platform. Its base is like a huge drum, 36½ feet high and 198 feet in diameter. The circumference is divided into sixty equal spaces by sixty Ionic columns, attached to the wall and surmounted by a frieze and cornice. North, south, east, and west are what appear to be four doors of stone, but they are false doors, for the masonry is quite solid behind them. The upper part of the monument is in appearance like a blunt cone, or rounded pyramid. It rises in a series of high steps some 75 feet above the cornice. The total height is about 110 feet, and it may originally have been as much as 130 feet from base to summit.

Armed with an artesian well-sinking outfit, the two explorers set to work to probe the mountain of stone in search of the secret chamber. They put down the first bore from what they believed to be the geometrical centre. Unfortunately they were misled by a land survey mark on the top, and missed what they sought by a few feet. They proceeded to put down a series of bores between that and the eastern false door. All these efforts were unsuccessful. Other bores were put down at various points. For six months they laboured in vain, then the plunger in the thirteenth bore suddenly fell a clear eight feet, precipitating the workmen on to the stone blocks. The long-sought cavity had at last been located.

The successful bore had been sunk opposite the false door on the south. At this point a mine was driven into the mass of the solid masonry. It took ten days to cut a way through, and then the explorers found themselves in a long gallery about 8 feet high and 6½ feet broad. The walls were formed of large blocks of squared and dressed limestone, finely jointed. There were niches along the walls which seemed as if they had been made to hold lamps. This gallery, which was about 500 feet long,

circled almost completely round the monument, and then, turning inwards like a spiral, ended in two vaulted chambers in the centre. They were shut off by doors of stone which slid up and down in grooves like a portcullis.

Alas, the casket was empty! For all these centuries the assailants had been attacking an empty shell. The tomb had been rifled at some early date before the secret of the entrance was lost. Ample evidence was found of the visits of early robbers who knew the secret and who, from the gallery itself, had made excavations into the solid mass in search of other concealed chambers.

In the dust of the floor the modern explorers found two relics to show what had been the nature of the booty, the scattered beads of an Oriental necklace of cornelians and pearls, and a pendant broken from some Egyptian jewel. The latter is significant as a link with Selene Cleopatra. From the harbour of Cherchel there has also been dredged a portion of an Egyptian statue in black basalt, bearing the cartouche of King Thothmes III. The Mauretanian queen had not forgotten the land of her birth and of her mother's tragic story.

Now that the clue had been discovered it was comparatively easy to find the original entrance. The gallery, winding round from the central vault, rose seven steps, and came to an abrupt end in another chamber exactly opposite the eastern false door. Here the entrance was found where no one had suspected it, outside the structure altogether, underground, and buried, ironically enough, beneath the debris of previous attempts to demolish the tomb. Very simple, like most secrets when one holds the clue.

Ptolemy, the son of Juba and Selene, died miserably in a dungeon in Rome. He is said to have been a weak and dissolute ruler, but history is apt to be partial to the conqueror. He perished, and with him the dynasty for whose names this monument was designed to secure immortality. In the Louvre may be seen two portrait busts of Ptolemy which were dug up from the ruins in the neighbourhood of Cherchel. One can recognise in that Oriental countenance the mingled strains of Egypt, Phœnicia and Barbary.

The glory has departed but the Berber race endures. It

TOMB OF THE DAUGHTER OF ANTONY AND CLEOPATRA, THE AMAZING TOMBEAU DE LA CHRÉTIENNE

After Julius Cæsar was murdered in 44 B.C., he was succeeded in the imperatorial office by Octavianus Augustus, the people's idol ever since Antony had left Rome and fallen slave to the woman of whom the poet said: "Age cannot wither her, nor custom stale her infinite variety"—the romance-encircled Cleopatra. The daughter of their liaison, Selene Cleopatra, was adopted after Antony's death by his wife Octavia, sister of Augustus, and guardian, too, of Juba, son of the King of Numidia. An attachment soon sprung up between these young people, and on their coming of age they were married, after which Augustus established Juba as ruler of Numidia. This great monument was erected to receive the bodies of his queen and himself at death; like all such conspicuous tombs, it has been plundered by treasure seekers.

still populates the land and preserves the ancient language. It has persisted throughout the domination of Phœnician, Roman, Arab and French. Under French protection the vine, the orange, the fig and the olive flourish on the rich plains around. But, while the Roman temples of Cæsarea and Tipasa have disappeared, this un-European monument still crowns the hill and looks over the Mitidja valley on the one side, the Mediterranean on the other, proclaiming that the soul of the land is of Africa, not of Europe.

THE GREAT MONUMENTS. IX

THE HITTITES: VESTIGES OF A VANISHED EMPIRE

By J. Garstang, M.A., B.Litt., D.Sc. (Oxon)

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AMONG the Wonders of the Past the long forgotten Empire of the Hittites now claims a place. Older and more enduring than Assyria which has left its useless name in red upon the page of history, the Hittite dominion in Asia Minor —though without a name which defines its territory—left a permanent impress upon the destinies of the ancient world, and so upon the civilisations of to-day. This influence was of twofold origin: primarily, the unique geographical position of Asia Minor which is the natural line of communication between the two continents first civilised and a consequent meeting place of advanced races; secondarily, the strong character of the Hittite peoples illustrated alike by the tendencies of their institutions and religion and by the efficiency of their rulers. At such a focus only a strong race could have sustained the rôle that was demanded of them, for theirs was no light or easy part in the drama of nations.

From the Anatolian plateau they might look down indeed upon the distant monarchies of Egypt and Babylonia, slumbering in peaceful prosperity provided by the Nile or the Euphrates. With these two peoples, though an occasional bid for empire led at different times to conflict, ended at last by the establishment of diplomatic relations, the Hittites maintained effectively a triangular balance of power in western Asia for more than a thousand years. Inside this triangle smaller kingdoms, like that of Mitanni

in northern Mesopotamia or that of the Amorites in central Syria, rose and fell; some city-states, like Aleppo or the unplaced "mighty land of Istahara" attained a momentary or recurring local importance; but from before the first dynasty of Babylon till the fall of Troy (from 2600 B.C. at least, until 1200 B.C.) the Hittites remained the bulwark of Europe in Asia. During all this time no migrations of peoples westward, like that of the Turks in modern history, passed through the Hittite lands. Had this barrier yielded the history of Europe might have been quite different. Yet that was the lighter half of their unconscious task. The warm plains of the south might perhaps produce no physical energy that could surmount the rigours of the Taurus mountains, but beyond the upper Euphrates the kindred rival power in Armenia—then called Harri and later Urartu—was a constant menace on the eastern horizon; while from later historical events, such as the siege of Troy and the coming of the Phrygians from Thrace over the Hellespont, or of the Cimmerians followed by the Scythians from southern Russia by way of the Caucasus, it may reasonably be inferred that in those directions also the pressure of would-be migrants from south-eastern Europe into Asia, though varying in intensity from one century to another, was ever present. It was, in fact, from this direction that the final storm burst; the Assyrians only took advantage of the "fait accompli."

The great disaster occurred at the dawn of the Iron Age, about 1200 B.C. When the Homeric bards sang the siege of Troy, which fell within a few years of that date, the place of the Hittites in popular legend was already being taken by the Phrygians, who had joined, it would appear, in the destruction of their power. Later Assyrian records speak of the inroads of "Muski," not Hittites, in Asia Minor at about this time. The repercussion of this tragedy, which shook the foundations of society in the Greek lands and islands also, was felt in distant Egypt. The Pharaoh of that age (Rameses III.), describing the irruption of Philistines and kindred tribes into Syria, tells how all the north was disturbed, how new invaders carried all before them, advancing like a flame, leaving the Hittite lands and northern Syria desolated in their trail. Whether the Philistines, whose heroes are Homeric in every aspect, were among the orig-

Photo by Prof. Garstang.

WALLS OF ALEPPO GIRDLING AN ANCIENT HITTITE SETTLEMENT

Ancient sites have a way of reasserting their importance through history; the circumstances that first induced men to dwell on them may operate again and again in different ways. So with Aleppo: the history of the modern Syrian town, on which caravans still converge and whose citadel is girt with drowning medieval walls, goes far back in time—the very mound, or "tell," on which the citadel stands marks the site of one of the most powerful centres of the Hittite confederacy, in its prime during the Hyksos invasion of Egypt. It was the Prince of Aleppo it will be remembered who fared so ill at the Battle of Kadesh.

"From "The Land of the Hittites," by Prof. Garstang.

HITTITE LION FROM THE PALACE GATE AT MARASH

One of the oldest city names in the world is Marash; as Marash the city appears in the earliest Hittite records, and so it is called to-day. It was among the last Hittite centres to fall beneath the Assyrian onslaughts in 709 B.C. This lion flanked the palace entrance and is characteristic of Hittite work, although covered in a unique manner with hieroglyphs.

Photo by the Liverpool Institute of Archæology.

SIMILAR LION STILL GUARDING THE SAKJE-GEUZI PALACE

More normal is the lion at the gateway of the palace at Sakje-Geuzi; these lions typified the might of the great mother-goddess of Asia Minor. Indeed, the local rulers being priest-kings their palaces were of the nature of sanctuaries. The figure on the right is reminiscent of much of the Carchemish sculpture.

Photo by Prof. Garstang.

DIGGING UP LOST PAGES OF HISTORY: EXCAVATIONS AT BOGHAZ-KEUI

The history of the Hittite peoples extends far beyond the foundation of Boghaz-Keui, later to become the capital of their confederacy; as early as 2800 B.C. they are mentioned in contemporary records, although the name Hatti appears to have then referred to one tribe only. But it was not until Hattusil I. started his victorious career and (it seems) founded Hattusas, or Boghaz-Keui, that the Hittites became a world power, as we might say; this was in about 1700 B.C. The photograph shows the excavations conducted on the site of the palace-temple (built c. 1300 B.C.) with the modern village just beyond; in the foreground, in front of the small bell-tent, may be seen the trench wherein were discovered the first tablets of the extensive Hittite records.

Photo by Prof. Garstang.

ENTRANCE TO THE PALACE WHERE THE HITTITE LORDS OF SAKJE-GEUZI DWELT

Comprehensive view of the palace gate at Sakje-Geuzi—the lion in a previous page may here be identified in the middle distance below the native workmen. A similar lion flanks the nearer side of the gate, together with other sculptures, among which may be recognised a representation of the sacred tree. In the centre is the pedestal of a column supported in the Hittite manner by figures, in this case sphinxes reflecting Egyptian influence. A flight of steps once led up to the gate. On the left-hand edge of the excavation may be seen fragments of broken pottery; these, together with the general character of the sculpture, indicate that the palace is to be assigned to the late Hittite, or "Carchemish," period.

Photo by Liverpool University Institute of Archæology.

HITTITE ALLIES AT THE BATTLE OF KADESH

Other of the Hittite forces at Kadesh as portrayed by the Egyptians present such a clean-cut, Greek appearance that they have been thought to be some of the proto-Greek invaders of Asia Minor, perhaps adventurers from around Troy. Details of their armour and equipment also tend to support the theory.

From "The Land of the Hittites," by Prof. Garstang.

SCULPTURES AND SPHINX GATE EXCAVATED AT EYUK

Excavations at Eyuk have revealed a structure closely resembling the lion gate on the acropolis of Boghaz-Keui; but one striking difference is the substitution of sphinxes for lions at the gateway. This photograph shows the left-hand wall; the gate itself is recessed, and one of the sphinxes may be seen on the right. As for the sculptures, at the angle where the gateway recedes there is a bull (not shown here) symbolising virility; then comes an altar with the priest-king and his queen; then attendants with sacrifices; and finally small figures with hammer, chisel and a ladder who probably represent the masons at work on the fortress.

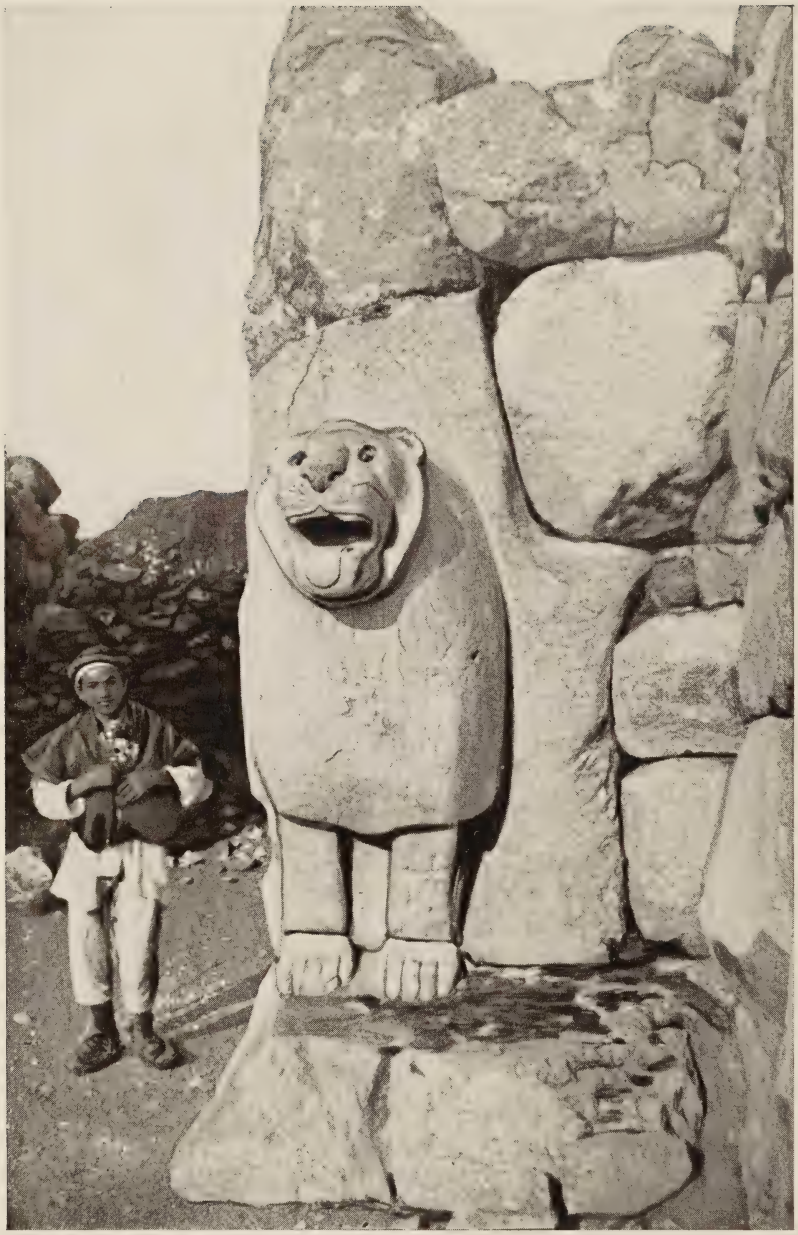


Photo by Prof. Garstang.

LION GATE AT BOGHAZ-KEUI

The capital of the Hittite confederacy before troublous times shifted the centre of power was Hattusas, better known by the Greek name Pteria, or as Boghaz-Keui the modern village. The magnificent lion gate on the acropolis, dating approximately from 1300 B.C., has been called the most realistic work of such antiquity yet found.

NATURAL ROCKY SHRINE OF THE PRIMEVAL HITTITE GODDESS OF EARTH

At a distance of about two miles from Boghaz-Keui there is a natural recess in an irregular outcrop of rock; the spot is called in the Turkish tongue Iasily Kaya, which means simply "Inscribed Rock." In the days when the Hittite empire flourished advantage was taken of this recess to form a sanctuary of the great mother-goddess Ma, prototype of the Græco-Asiatic Cybele. Little attempt was made to alter the natural contours of the rock, but the interior was adorned with bands of symbolic sculpture.

Photos by Prof. Garstang.

WAR GOD AND HIS PRIESTS IN THE SHRINE OF MA

Part of the band of sculpture adorning the open-air sanctuary of the Hittite mother-goddess. Among the rites celebrated in this shrine was the "divine marriage" of Ma with Teshub, the warrior god; he is represented in various guises on the rocky walls, and during the ceremony as part of the ritual his image was borne to the shrine on the shoulders of four priests.

Photo by Prof. Garstang.

STAUNCH MASONRY OF BOGHAZ-KEUI PALACE WALLS

Study of the Hittite remains in Asia Minor takes us back to an antiquity far beyond that of Carchemish in its heyday, which represents a new seat of power on the banks of Euphrates after the old confederacy had been smitten and dispersed by peoples from the north. And nothing could emphasise this antiquity better than the cyclopean masonry of the palace at Boghaz-Keui; standing on the edge of a steep ravine these great bonded and interlocking blocks are still secure after more than 3,000 years.

inal invaders from the north, or whether, like Odysseus and others of the attacking hosts at Troy, they were driven by this new invasion or by lust of adventure far from their homes, is not a question of immediate concern. What is clear from the independent records of three different countries is that an intensive migration of powerful European peoples poured into Asia Minor and blotted out the memory of the Hittite power that had bound its heterogeneous races together for 1,500 years. Thereafter the Hittites appear in the records of Assyria and in the Bible as a Syrian confederacy; for, in fact, their centre of power was transferred to Carchemish, and for some centuries the northern states of Syria that had long been used to Hittite administration, if not largely peopled by Hittite stock, maintained the Hittite military, political and social traditions, though hemmed around by foes and gradually crushed out of separate existence by the surrounding pressure.

With the fall of the Hittites Asia Minor became inevitably the scene of a long struggle between East and West. First Assyria, then Persia almost passed its portals; the pressure was westward until in turn arrested and turned back by Alexander and the organization of the Roman Empire. And though the classical writers tell us much that is now of interest in the story of the Hittites, there descended over the memory of their once great Empire a dark curtain that was not to be lifted for more than two thousand years.

It is difficult even now for us who recall our schoolday memories of the "Kings of the Hittites," held so greatly in respect by the chroniclers of Israel, or who have read in this work the excavator's own account of the Wonder City of Carchemish upon the Euphrates, to realise that long before the period of these records Hittite kings more powerful than those whose fame terrified the Syrian hosts, and cities containing palaces of Hittite kings greater far than Carchemish, had already faded from sight and memory. Yet it was so, and the restoration to the book of history of this effaced chapter, like the revelation of the old Cretan civilisation of Cnossus, is hardly less wonderful than the contents of the chapter itself. The curtain began to rise with the decipherment of Egyptian hieroglyphs a hundred years ago; gradually egyptologists recognised in the name "Kheta" and the

battle scenes that decorate several temple walls the records of a fateful struggle between the Pharaohs and the old Hittite power. But the only independent documents available at that time, as we have seen, pointed to the home of that power as in northern Syria.

Then within living memory of the past generation a few other scholars, putting two and two together, saw that there must be some relation between this old-famed people and the unclassed works, inscriptions and monuments of Asia Minor. Finally Professor A. H. Sayce who lives to see the justification of his thesis, by comparing the hieroglyphic inscriptions of Hamath in Syria with others similar upon rock carvings near Smyrna, and guided by the genius that has always inspired his work, framed his theory of a common origin, and launched upon an incredulous modern world "The Story of a Forgotten Empire." Some scholars of sufficient sympathetic imagination grasped the clue; distinguished Frenchmen took up the practical investigations that were needed, and M. Maspero in his "Struggle of Nations" gave full justice to what could then be gleaned or inferred of the Hittite power. Some few British scholars, notably Professor Ramsay and Dr. Hogarth, pursued the topographical exploration of Asia Minor; but at the beginning of this century the word Hittite was spoken half apologetically and written between inverted commas.

The Institute of Archæology of the University of Liverpool then despatched three successive expeditions into Asia Minor to investigate Hittite origins. After the first of these it was decided to examine more closely the site of Pteria, identified with the conspicuous and mighty ruins crowning the hill above the Turkish village called Boghaz-Keui within the circuit of the Halys river. The second expedition was equipped accordingly in 1907, under the direction of the writer of this article, but on arriving at Constantinople found itself balked by diplomatic intervention. Proceeding none the less to the site, the party was enabled to take part in the progress of the work by courtesy of the late Dr. Winckler who had charge of the excavations for the German society that had secured the concession. There and during these days there came to light in a series of buried chambers in a palace-temple the lost archives of the Hittite empire.

These archives are written on tablets of clay baked after inscription. Some are large, 2 feet in height; others are much smaller and some are mere letters similar to those of Tell-el-Amarna. They were found by thousands, buried in the ruins and débris, as the photograph shows. Many had been clearly grouped together in separate "pigeon-holes"; the writer dug out dozens with a pocket-knife. How little even then could it be realised that the greatest archæological discovery of all time had been made. It has required fifteen years of patient research and the creation of a whole new school of Hittite studies, in which are some of the most notable German scholars, with the distant collaboration of some few in England, France and America, to copy, edit and expound less than one hundred of these new historical documents. The first results are momentous; and though the work may be said to have barely commenced, the historical information already covers an additional period of a thousand years. The script employed in these writings is uniformly cuneiform—that of the Semitic states of Babylonia and Assyria. Some of the texts are in a Semitic language which is readily translated; but the great bulk are in one or other of eight different Hittite languages or dialects, most of which were unknown. The clue to these was given by Professor Hrozny of Prague and translations are now possible enabling the texts to be read like Latin and Greek, albeit tentatively.

Notwithstanding all the difficulties of interpretation the general nature of the new documents is now apparent. They include treaties with foreign countries, including Egypt, Mitanni and the Amorites, treaties of alliance or confederacy with states within the Empire generally prefaced with an historical narrative, royal decrees and speeches, summaries of campaigns and diplomatic correspondence with foreign powers, including both Egypt and Babylon, as well as numerous documents of more local interest, wills and testaments, inventories and registers of property, patents of nobility, prayers, oracles and soothsayers' formulæ, descriptions of ritual and festivals, military regulations both administrative and technical including detailed instructions about the construction of camps, the height of ramparts, the depth of ditches and the length of palisades, and guard duty on the frontiers or in fortresses; lastly catalogues of books indexed

by the names of the authors. The mere recital of this list indicates clearly the stage of civilisation to which the Hittites had attained, and demands for their history a place in the school-books of our day.

Hittite history begins, so far as our present knowledge goes, with the remote age of the great Sargon of Akkad or Agade (estimated at about 2,800 B.C.) who ruled in lower Mesopotamia seven centuries before Babylon became the capital of that area. Assyria was not yet born, and even old Egypt was under the rule of an early dynasty of pyramid-building kings. At this distance of time Hittite archives are still scanty, and the central Hittite state (called Hatti) appears only a generation later as one of a group that rebelled against Mesopotamian authority. The King of Hatti at that date (c. 2750 B.C.), the first on record, was called Pamba, but he was not called Great King. It is indeed to be inferred from these earliest texts that the Hittite states were not yet welded together, and that the tribe of Hatti had not yet attained the predominant place it subsequently held. Indeed the capital of Hatti at Boghaz-Keui, called Hattusas, appears to have been rivalled if not surpassed in importance by another northern centre called Kussara. This early name may be recognised in its later form Gaziura by which it was known also in classical times: the geographer Strabo tells us that it was the ancient seat of kings, but already in ruins before his day. The city crowns a defensible hill in a picturesque position in the valley of the river Iris in Pontus.

The internal struggle for ascendancy between the two rival houses seems to have endured more or less for several centuries, but that did not prevent the consolidation of the Hittite kingdom and the gradual expansion of its frontiers. From the central plateau of Asia Minor they gradually extended their dominion until, early on in the second millennium B.C., "the seas became their boundary," and the southern coastlands that formed the separate kingdom of Arzawa as well as the states bordering on the Euphrates were brought within their sway. Shortly afterwards Hattusil I. (to judge from his name) fixed the capital at Hattusas; at any rate in the reign of his grandson Mursil I. the centre of Hittite power was permanently established. This same king looms as one of the great conquerors of antiquity,

Photo by Liverpool University Institute of Archæology.

NUPTIALS OF THE DIVINE PAIR, WHEREBY THE EARTH MIGHT YIELD HER FRUITS

Exact interpretation of all the numerous figures decorating Iasily Kaya is impossible; but interest centres on the group of the end wall, and the general meaning of these can almost certainly be determined. On the left, borne on the backs of priests, is the national god of the Hittites, Lord of the Sun, of War, of Fertility, called Sutekh or Teshub or Sandes in various places; in the centre, standing on lions, are the Mother Goddess (Ma, Cybele, Ishtar) and her son, prototype of Attis and Tammuz. The scene is the divine marriage of the main pair, symbolising the yearly fertilisation of the earth. Two minor goddesses on an eagle attend Ma.

Photo by Liverpool University Institute of Archæology.

HITTITE TYPES AS THEY APPEARED TO EGYPTIAN EYES

Who precisely were the Hittites and whence did they come? We have seen that they were a confederacy and that they took their name from a comparatively small tribe, the Hatti; but while there was probably a nucleus of peoples racially akin to these Hatti, it is probable that the confederacy as a whole was made up of many diverse nationalities. Egypt gives us several portraits of them; reliefs of the Battle of Kadesh in the temple of Rameses II. at Abydos show some of an almost Mongoloid type.

leading the Hittite forces to victory not only into Syria, where Aleppo was taken, but as far as Babylon which was captured and sacked.

The Babylonian and Hittite annals confirm one another in this record. The Hittites left in Babylon traces of their presence which have been recovered in modern times; and the statues of Babylonian deities which they carried off were restored a century later by the exploits of a Kassite king established in Babylon. This bid for empire in western Asia occurred about the same time as the overthrow of the Egyptian monarchy (in the 18th century B.C.) by Asiatic invaders called the Hyksos. During this period though the records are not clear, it is apparent that the Syrian state of Aleppo became ascendant. Whether this new development indicates a transference of the Hittite power or an influx of new peoples is a question not yet answered.

About the year 1469 B.C., a hundred years after the re-establishment of the Egyptian monarchy, when in fact Thothmes III. was seeking to expand the Egyptian Empire or at any rate to recover his frontier in Syria, the Hittites are first mentioned in the Egyptian records. This was clearly not the first incursion of the Hittites into Syria: we know from the Bible that Hittites were accepted members of the communities of Palestine as early as the age of the Patriarchs; and their own records make allusion to Damascus at that early period. Their early penetration into Palestine may be traced in other ways. Now, however, they enter the political arena of western Asia in the full light of history: their own records are continuous from this time till the end, while from this date for two hundred years the references to the Hittites in Egyptian sources are of increasing frequency and interest. Both powers in fact were feeling their way to the possession of Syria, and it is to be conjectured from this simultaneous advance on both hands that the power of the Amorite buffer state, which at one time attained a notable expansion, was now weakening. The events that followed fill a fascinating page of history.

There may be traced hereafter the ebb and flow of conquest and influence to the north or to the south as national leaders arose on either hand to seize the opportunity of the moment, stimulated afresh in each generation by the deeds of their predecessors. Around the date 1375 B.C., when the Hittite imperial spirit was at

its height and Egypt was weak, torn by internal dissensions of religious origin, the documents of both countries illuminate the international situation in a manner without parallel. The letters found at Tell-el-Amarna in Egypt were long the chief source of our knowledge of these times; they are amplified now by the Hittite archives of the period, some of which allude from the Hittite standpoint to incidents and situations already familiar from the reports sent by the Pharaohs' representatives and vassals in central Syria. This tripartite correspondence as seen to us now is full of human interest and even pathos. For the same chieftains who write to the Pharaoh, making their obeisance as they quaintly say "seven and seven times," while protesting their loyalty and devotion or skilfully transferring discreditable rumours to their neighbours, are found to have written at the same time to the Great Hittite King offering service or suggesting alliance in some adventure. They are in fact convicted now, in the court of Time, of their duplicity, and their own letters are produced in evidence against them. These Semitic chieftains, then as now quick to read the signs of the times, saw in the lack of support given even to loyal vassals the Pharaoh's increasing indifference, interpreted as helplessness, and so secretly prepared for the coming crisis by overtures with the advancing Hittite. But the inevitable clash of arms was still delayed, chiefly by the continued lassitude of Egypt, for nearly a hundred years. Even the Hittites, though at the height of their power, seem to have been too busied with great events nearer home to attempt to win a permanent military footing on the Egyptian frontier in Palestine.

Meanwhile in the north the Hittites, under a dominant line of warrior kings, had been busy with home affairs and the strengthening of their empire. The Great King was called on to cross the Euphrates to quell risings among the turbulent tribes of Armenia, and eventually descended to northern Mesopotamia to punish the instigator of these rebellions. He added to the empire the whole of the realm of Mitanni which reached from the Euphrates to the Tigris. The annals of these years are complete, and one may follow the exploits and incidents of these campaigns year by year. King Mursil III. in particular, who mounted the throne about 1330 B.C., devoted his first ten years to

Photo by Prof. Garstang.

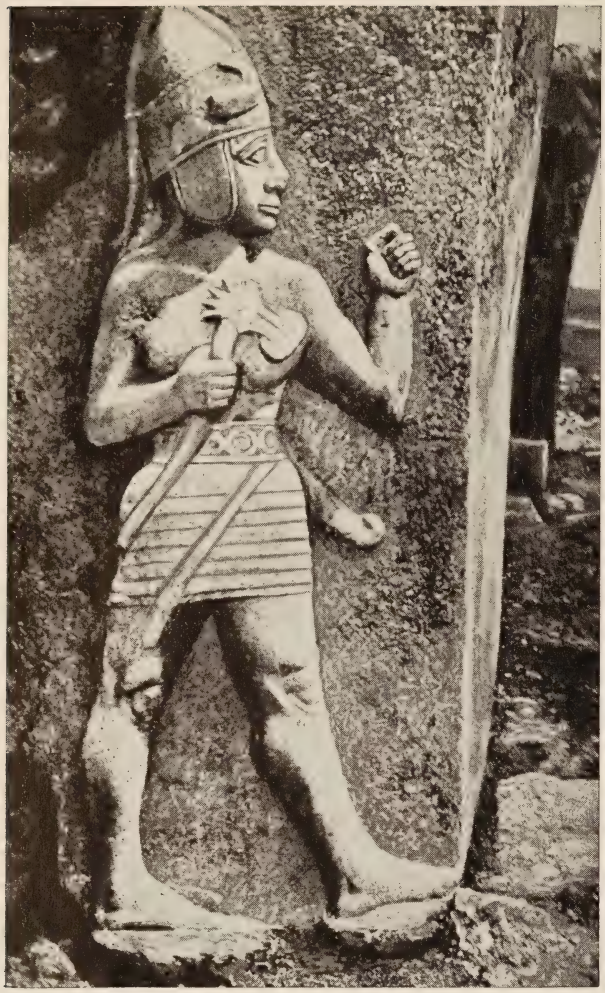
THE HITTITES AS THEY SAW THEMSELVES

There can scarcely be said to have been a Hittite "race"; but the open-air sanctuary at Iasily Kaya near Boghaz-Keui furnishes us with contemporary portraits of the Hittites by themselves—presumably the genuine Hatti type, properly so called. The figures, in an inner recess, are celebrating a harvest dance; they bear sickles and wear the peculiar Hittite peaked hat. They seem, from religious indications, to have been once a mountain people.

Photo by Liverpool University Institute of Archæotogy.

AMORITE AUXILIARIES OF A HITTITE ARMY

Yet other Hittites from the temple at Abydos, in this case shown as prisoners, may be identified by comparing them with facial types still found persisting in parts of Syria to-day; they are manifested by the inhabitants of the Lebanon district and the Orontes valley—home of the Amorites who play such an important part in the Biblical story.



HITTITE AMAZON AT BOGHAZ-KEUI

On a gateway at Boghaz-Keui was discovered this startling figure; thought at first to be a Hittite king, it has since been recognised by many, in view of the shape of the thighs and prominence of the breasts, to represent a female warrior, and may therefore furnish a basis in fact for the Greek legends of the Amazons—perhaps a caste of warrior-priestesses.

Photos from Meyer's "Reich und Kultur der Chetiter."

ROCK-CARVED GOD AND KING AT IVRIZ

At Ivriz beneath the Taurus Mountains is a vigorous rendering of the god of agriculture, 14 feet high, with a king whose name is perhaps to be read "Ayminyas." The king, hands raised in adoration, stands richly robed in a garment among whose decorations may be recognised the symbol of the swastika.

a series of campaigns, for rebellion had broken out afresh owing to his youth. Our first task in the understanding of these records has been the identification of the place-names which, as written in Hittite, are largely unfamiliar. This problem in itself has now become a special field of research, and considerable progress has been made. As an example of the method and interest of this inquiry two names may be mentioned. The one is Yaruwanda, in which Hittite form lies buried the name of the historic Syrian city Arwad, a name which survives to-day. By this analogy the more formidable looking name Massukhanda may be recognised as the city of Massukh and identified with the famous city of Mazaka-Cæsarea, upon the plateau of Asia Minor. But the legendary founder of Mazaka was a traditional ancestor of the Cappadocian peoples named Mosokh, and his name, so clearly Hittite in origin, has already been recognised as the biblical Meshekh. So that, apart from the Hittite question at all, the interpretation of their records sheds new light upon biblical topography.

These identifications illustrate the method by which the Hittite records have been interpreted, with the result that the campaigns of Mursil may be followed in the map. He led the Hittite armies in successive years among the states bordering on the Euphrates which formed the eastern frontier of the Hittite homelands, and soon we find him turning his attention to the southern coast-lands of Asia Minor which he reduced again to his authority by a series of rapid blows planned and directed with the skill of an experienced general. All these southern lands, which had formerly been a single kingdom, he now divided into principalities, each under its separate king. We can follow him also in the northeast, where crossing the Euphrates again he advanced against the states bordering on the upper Tigris. In northern Syria, where Egyptian influence had prevailed till then, he concluded a series of treaties, for he was statesman as well as general; and by this means he attached to the Imperial cause under the terms of offensive and defensive alliances the powerful districts of Aleppo, the city states upon the Orontes, and the important kingdom of the Amorites in the Lebanon.

The Hittite empire had now attained its full extent, dominating all the territories indicated upon our map. Its capital was

at Boghaz-Keui as of old, where the wonderful ruins of its greatness may still be seen, and excavations have disclosed the remains of earlier ages. The circuit of the ramparts may be followed for a distance of four miles, crowning a hilltop, protected by great earthworks with battlemented walls, numerous towers and defended gateways. Sculptures which adorned the entrance give proof of settled times and prosperity. Within the circuit were palaces and temples; but the greatest building of this stage lay on lower ground to the north, which in the security of these times was also enclosed within the outer defences of the city.

With the empire thus constituted upon a military and almost feudal basis, the northern power dominated the situation, so that when Egypt under Rameses II. awoke to a sense of its former responsibilities in Syria, the inevitable conflict could not long be postponed. The Pharaoh moved northward with four divisions on Kadesh, the Amorite capital in central Syria. On his side the Hittite monarch mustered all his forces from the ends of his empire, even enrolling as mercenaries warriors from the Troad who had not previously fought in his wars. Indeed, the Egyptian records tell us that the Hittite "left no people in his road, their number was endless, nothing like it had ever been seen before, they covered the mountains and hills like grasshoppers." With this vast array the Hittite king moved southwards to occupy Kadesh and await the oncoming of the Pharaoh. It was a fateful moment in the history of the ancient world. The Pharaoh, forewarned, made adequate preparation: his best and most tried charioteers were led by him in person. The battle was fought under the walls of Kadesh in the year 1288 B.C.: it was full of incident, and at one stage the Pharaoh found himself in a position of great danger; but the issue (it will not be surprising to appreciate in these days) was a disaster for both combatants. The Hittite armies melted away, and the Pharaoh retired to the calmer security of the Nile. Fifteen years later a treaty of peace was concluded between Rameses and the Hittite King Hattusil III., who had meanwhile succeeded to the throne.

With these events the Hittite sun passed the zenith. The Assyrian in the east and European peoples in the north became a never-increasing menace, and the sudden cessation of the Hittite records about 1200 B.C. tells plainly of the end of the Hittite

Photos from Meyer's "Reich und Kultur der Chetiter."

TESHUB AND JUPITER OF DOLICHE

An instructive example of the persistence of religious ideas is afforded by the comparison of these two reliefs. That on the left is a Hittite carving of the sky-god Teshub discovered at Babylon—probably the spoil of war and certainly dating from very early times; above is part of a votive tablet discovered near Frankfort in Germany. The attributes of the two gods show an obvious connexion—how does it come about? Roman soldiery, finding a god of Hittite characteristics at Doliche, adopted him with enthusiasm, rechristened him Jupiter, and spread his worship over the whole Roman Empire.

Photo by Prof. Garstang.

HITTITE ARCHIVES PHOTOGRAPHED AT THE MOMENT OF DISCOVERY

One of the most wonderful discoveries in the history of archæology was that of the Hittite archives at Boghaz-Keui; they cover a bewildering multiplicity of subjects, from diplomatic correspondence to military treatises, and even include well-indexed catalogues of books. This photograph shows the baked clay tablets projecting from the side of the trench.

empire. It speaks well for the sagacity and foresight of the emperors of previous generations that they had prepared the way for the transference of the Hittite seat of power to Carchemish by appointing princes of the royal house to rule that centre, so that the Hittite tradition was maintained without break. But the history of the Hittites in Syria from 1200 B.C. until the fall of Carchemish and the subsequent fall of Marash towards the end of the eighth century B.C. was that of local kings, leagued together, indeed, for offensive and defensive purposes as of old, but without the imperial greatness and the glory of the old-world rulers of Asia Minor. Nevertheless the city of Carchemish was one of the wonders of the age, and in the valley which lies to the west, separated by the Amanus range from the sea, there flourished cities with royal palaces of Hittite character, though at various times under Assyrian domination. Excavation has disclosed these fortifications and palaces, and in the illustration facing page 861 are seen some of the vivid sculptures of a palace-portico of this period.

It is not yet possible to estimate the full measure of influence which the Hittite domination in Asia Minor imparted to the world that surrounded it, both in Europe and in Asia. It is certain, however, that several of the Greek gods and various elements of Greek worship are to be recognised in Hittite prototypes. One of the most interesting features of the Hittite religion was the institution of the divine marriage. The original inhabitants of the land seem to have worshipped the elemental and physical forces of nature, such as mountains, rivers, the sun and so forth, which they personified in the conception of a great mother-goddess. The Hittite leaders, who established their domination by force of arms, brought with them on the other hand the idea of an all-powerful god armed like themselves, the vigorous ruler of storms who grasped the lightning flashes in his hand—the typical soldier's god. The assimilation of old and new brought about the union of the two in a divine institution, a ceremony doubtless repeated annually as a spring festival. The cult of the goddess survived even after the fall of the empire. In her time-honoured sanctuary at Arinna she had been worshipped not only as the mother of earth and fertility, the sun-goddess, but as the guardian of oaths and treaties, the protector of fugitives,

and as the goddess of war. The Romans found her shrine enduring at Comana, and so striking and appealing to them was the perpetuation of her cult that they identified the goddess with Bellona, their own goddess of war, and called her by that name.

In northern Syria also the Hittite worship of the mated deities survived long after the disappearance of the Hittites in the cult of the Syrian goddess at Hierapolis. The same dual worship is found to have been preserved at Doliche, but in this case it was the god who was ascendant. Roman soldiers, enrolled from this village at the foot of Taurus to serve in Britain on the Roman Wall and other garrisons of the north, brought with them this worship which took root once more under new conditions, and that god became widely popular among the Roman soldiery by the name of Jupiter of Doliche. We publish one illustration of this deity; even the uninitiated can recognise in his lightning emblems and other attributes the successor of the old-world Teshub of the Hittites, destined thus to live again in Britain long after the Hittite empire had perished. This is only one example of hundreds which will surely come to light to illustrate the deep-rooted nature of the civilisation implanted by the Hittites in Asia Minor and its influence upon that of Europe. Our whole knowledge of these factors in our life is derived from the results of one single excavation. What further Wonders of the Past lie buried awaiting the excavator's spade?

TEMPLES OF THE GODS. XVI

THE TOMB OF OSIRIS AT ABYDOS

By Claire Gaudet

THE TOMB OF OSIRIS AT ABYDOS

By Claire Gaudet

Lecturing on Archæology at the British Museum

Illustrated with photographs supplied by the courtesy of the Egypt Exploration Society

SCHLIEMANN, with his spade and his Homer, was the first to make the fairy tales of olden times come true; and now yet another legend, hitherto buried in the sands of Egypt, can be added to the tales about Troy and Mycenæ, Theseus and the Minotaur—a legend as misty as those of the Greek heroes but with an equal claim to be based on historical fact.

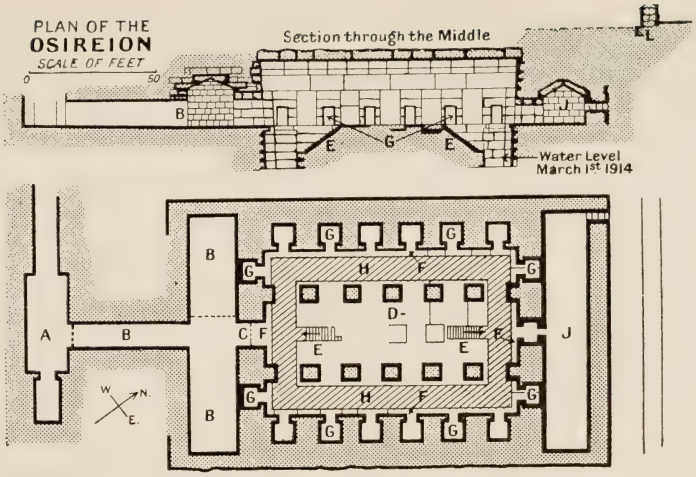
The head of Osiris, the god of the dead and the god of the resurrection of the ancient Egyptian, was said to have been enshrined at Abydos; and here it is that just before the Great War the Egypt Exploration Fund, under Professor Naville, directed all its energies to a site believed to be the tomb of Osiris. According to legend, he had once reigned as king in southern Egypt and had been trapped and drowned by his twin brother Set (really a king of the Delta, of the first dynasty), who coveted both his kingdom and his queen. One version of the legend handed down is that Isis, by means of magic, found the place where the Nile had cast up her husband's body, and hid it away secretly; but Set discovered it while hunting, and, tearing it into fourteen parts, distributed it over the country. Horus, the son of Osiris, instructed by his mother who was a great enchantress, performed certain ceremonies connected with the burial which resulted in raising Osiris from the dead and establishing him as King in Amenti, the Hidden, or Other World.

The dismemberment of Osiris may be merely an allegory of the victory of the king of the North over the South and the division of his country into fourteen parts; or it may mean an actual distribution of the members of the enemy sent to his fourteen nomes (or territorial divisions) in token of the defeat and death of their king. But the legend must refer to a Set king living at a far later date than the original founder of the name, for in the earliest times, as shown by Professor Newberry, there was no enmity between the gods Horus and Set. Abydos, from its earliest foundation, was a sacred city of the dead. It is situated where in the distance can be seen an opening in the mountains; there the departed of every day were said to assemble to await the arrival of the boat of the sun god, thence to be conveyed to the throne of Osiris where the souls of the dead were weighed and their due punishments or rewards meted out to them.

The ancient Egyptian held that the world was enclosed by a range of impassable mountains which were pierced in two places, in the east and in the west. The sun emerged every morning from the eastern gap, and at evening entered the Tuat, or Otherworld, which lay beyond the mountains on the other side, through the western opening. In predynastic times each town or city had its counterpart in the Otherworld on the banks of a river which corresponded to the Nile, so the dead continued to inhabit their own duplicate city.

The Tuat on the other side was also enclosed by an outer range of mountains similar to those which separated it from the world of the living; but being outside the world as the Egyptian knew it lit by its sun, moon and stars, and separated from it by the impassable mountains, it was a region of fearsome darkness; but for all that, we are told that the ancient Egyptian did not hold it to be under the earth, merely a sunless abode outside the earth's high mountains between the world and the sky, itself hemmed in by another high range of mountains.

As the sun god, whose cult had been brought in by the invaders from the East, journeyed in his boat, he left the world in the West and entered another boat of miraculous material which was unharmed by the scorching heat of the rays of the disk, and travelled through the darkness nearly in a circle until he



A. *Descending Passage.* B. *Passage & Chamber.* C. *Doorway.*
D. *Central Nave.* E. *Stairs.* F. *Ledge.* G. *Cells.* H. *Water.* J. *Tomb of Osiris.*

WATER THAT SYMBOLISED THE PASSAGE OF DEATH

Part of the water-filled aisle of the Osireion, showing well the unadorned cyclopean blocks that mark it as contemporary with the pyramids. In the left background may be seen one of the seventeen niches and the towing ledge that projects over the water on the outer margin of the aisle—probably used by priests when towing the Boat of Osiris on ceremonial occasions.

GLOOMY WATERS OF THE OSIREION

In places, as may be seen, the canal encircling the Tomb of Osiris was found encumbered with great blocks which, it is thought, may represent statues overthrown. On the left here is the side wall with its towing ledge and its cells or niches, and on the right the massive pillars of the water-isolated central nave.

reached the East, when he left his boat to embark on another, "the Boat of Millions of Years," which carried him on his daily round across the ocean of the heavens.

Boats were buried with the dead in which the soul might travel to join the boat of the sun god, and many measuring about two feet in length have been found by Professor Flinders Petrie.

The cult of Osiris at Abydos was not so much the cult of a state god as that of a local deity which it had absorbed, for prior to the establishment of his worship, which developed after the pyramid period, there had been at Abydos a local god called Khenti-Amenti, the Chief of the Westerners, that is to say, the King of the Dead. Osiris must have taken to himself the attributes of this more ancient god whom he completely superseded, for an early potsherd has been found with the inscription "Osiris-Khenti-Amenti."

Professor Petrie tells us that the cult was originally brought in by the first predynastic fair-skinned invaders from the Libyan desert, whose capital was Hierakonpolis. These invaders were taller than the indigenous inhabitants by four or five inches. Five different types have been traced before the first dynastic race which came from Babylonia and brought its own gods, the four gods of creation—the great mother-goddess Hathor becoming the personification of the Sumerian mother-goddess.

The situation of Abydos and the belief in the god of resurrection accounts for the importance the city assumed as a burial place to which the dead from all parts of Egypt were brought in order that they might the sooner enter his kingdom. Abydos flourished during the first and second dynasties. The seat of government was not far distant, at the city of This; and the newly established cult gave a greater sanctity to the place, for men wished to be buried in the same sacred ground as their god. But after the second dynasty the seat of government was removed from This to Memphis, and Abydos was abandoned as a burial centre till the twelfth dynasty. Professor Naville undertook the excavations of the Osireion or shrine of Osiris at Abydos in 1912 and 1914.

Below the forty feet or more of rubbish thrown up by Mariette years ago when he unearthed the Temple of Seti lay the wonderful building which has now come to light. A doorway,

formerly discovered by Professor Flinders Petrie and Miss Murray, had been found some years ago to lead to a passage 14 metres in length and at the time filled with débris. The ceiling, which formerly had been of large blocks of stone, had been removed in Roman times and used elsewhere. The side walls were inscribed with texts from the Book of the Dead of the time of Merenptah (1330 B.C.), representing the king entering the judgment hall of Osiris, where the forty-two assessors wearing the feather, the symbol of righteousness and truth, on their heads and on their knees ask him certain questions to which he must be able to reply in the negative before his soul is weighed in the scales in the presence of the Good Being (Osiris). These inquisitors have names such as "The Drinker of Blood," "The Crusher of Bones," "The Breather of Flames," and the negative answers are inscribed along the walls. These are: "I have taken no man's property wrongfully," "I have killed no man," "I have taken none of the offerings of the gods," and so on. At the end the king is seen, having come through the ordeal, seated and playing with men of two types a game somewhat like chess, which had been in all probability his favourite recreation during life.

The passage, which slopes gently down, leads into a large hall running right across it to the right and left, with funerary paintings referring to the same king. In this hall was a doorway with a lintel 15 feet long, and it was here that the great discovery was made, for the door led to a large sanctuary entirely different in character from any other building hitherto found in Egypt. It was in a very ruined condition, probably having been used as a quarry by Rameses II. for his own temple a short distance away, but still greater damage had been done in later times.

The building dates from the time of the Great Pyramid, if not earlier. It is constructed of immense stones larger than those found in any other temples or tombs, and the absence of all inscription is characteristic of the builders of the Great Pyramid and the so-called Temple of the Sphinx. The sanctuary measures 30 metres by 20; its walls are 12 feet thick, the inner part constructed of immense blocks of hard red sandstone joined together with beautifully made black granite dovetails, and the outer part cased with blocks of rough limestone. The work-

manship of the masonry is similar in treatment to that found in the Temple of the Sphinx. The interior is divided into three parts or aisles in its length by immense pillars of Assuan granite 8½ feet square, supporting granite architraves measuring about 15 feet.

The two side aisles are not paved, but consist of a continuous tank filled with water which runs round all four sides of the building, entirely isolating the wide central nave which is nearly twice the width of the water channel. There is a small towing ledge running along the outer fringe of the tank, formed of the ends of great blocks hollowed out underneath and projecting over the water; and built in the enclosing walls are seventeen small square cells, six in each side aisle, two at the entrance end and three at the opposite end. The central end cell has been thought possibly to have been the actual tomb. A small door at its extremity led into another great transverse hall similar to the first long antechamber to the sanctuary. The walls of this second hall were inscribed in low relief sculptures of the time of Seti I. The small square cells were found to have no flooring, but like the side aisles were filled with water. Their use remains a mystery. Professor Naville at first saw a similarity in these cells to the pylons or gates of the abode of Osiris, but of which there were twenty-two, not seventeen.

The pool now is encumbered with great blocks of stone which the professor thinks may very possibly be statues overthrown, as was the case in the Temple of the Sphinx where the magnificent diorite statue of Khafra was found thrust in the well. The question arises: by what means was the water brought to the sanctuary? It is said to have been connected with the river by a canal which has not yet been discovered, but the very presence of the water there to-day is evidence that the existence of a subterranean sheet of water had not escaped the marvellous science of the builders of the pyramid age; for it appears that what is now known as the underground Nile flowed under the desert as well as under the fertilised land then as now—when engineers are endeavouring to exploit it for modern irrigation.

The pool may have served as a symbol in the ceremonies connected with the Osirian cult, and the ledge around the outside was doubtless for the priests to tow the Boat of Osiris. One

can picture the majestic building as a setting for the brilliance and pomp of an Egyptian cult procession. In default of any definite interpretation for the features found in this wonderful sanctuary, one can only see in the pool the waters on which the soul journeyed to reach the judgment throne of Osiris, ultimately—if the soul were a just one—to ascend to the sky.

The central nave (a veritable "ship," since it stands in the water) is reached only by steps from the water, and a boat is necessary to gain them; and in their number, apparently eleven or twelve, they seem suggestive of the stairway up to heaven guarded by the god Set as seen in the papyrus of Asar-anp-ankh, published in Professor Petrie's Drew Lecture, 1913. The crossing of the Waters of Death is not of Egyptian origin, but can be traced to Mesopotamia by the earliest written records in existence, the Nippur Tablets translated by the Americans during the war. In these we have the legend of Gilgamesh crossing the Waters of Death in order to inquire of his ancestor, Ut-napishtim (our Noah), how to obtain immortality, for Ut-napishtim and his family had survived the Deluge and enjoyed immortal life.

In Egypt we find Set, the earliest of the pre-dynastic gods, in charge of the ladder up to heaven. Later the ladder idea is adopted in the form of steps by Osiris, apparently in the later development of his cult when Set worship was proscribed, for the figures in the Book of the Dead as "he who is at the head of the staircase."

The dynastic race we know came from the East, and brought to the country new, abstract gods—the Creator Ptah; the personification of truth, Maat; the universal father Min; and the great mother-goddess Hathor. These, however, we are told, did not greatly affect the native theology; but the new deities are obviously the four Sumerian gods of creation, the gods who ordered and brought about the Deluge according to the latest Nippur Tablets. One wonders, therefore, whether there can be some connexion with the Sumerian Ark which survived the Waters of Death, symbolising immortality, and the throne of Osiris to be reached only by crossing those waters.

Osiris appears to have been a great usurper, taking from his predecessors their chief attributes, together possibly with

ANCIENT SHRINE AT ABYDOS OF THE EGYPTIAN GOD WHO ROSE FROM THE DEAD

Here is the eastern end of the great central hall in the Osireion, of which a more general view but from the same aspect is given on the following page. The space visible is the central nave with its lines of square-cut massive columns; the roof blocks are missing, having been employed elsewhere in Roman times. Over the columns on the left, however, they are still in position and cover the strangest part of the whole shrine—a water-filled aisle that completely surrounds the central nave, thus cutting it off from all access except by boat. The dark cell in the background, one of seventeen, may have been the "tomb," though later converted into a door leading to a further chamber.

WHERE LEGEND SAYS THE HEAD OF OSIRIS WAS ENTOMBED

It is at Abydos in Egypt, some 100 miles downstream from Thebes, that one of the most fascinating discoveries of recent times has been made. It consists of the Osireion, or so-called "Tomb of Osiris," the sacred repository of the head of the Egyptian man-god and the chief seat of his worship in early times. The shrine is unique among Egyptian temples in that the central nave was completely surrounded by water—water that still lies there dark and mysterious, fed by an underground river, after nearly 5,000 years; for every indication points to an extreme antiquity for the building. On the left here is the antechamber inscribed with texts of the time of Pharaoh Merenptah.

their lands; for Egyptian mythology is very much simplified when we think of these gods as they really were—mighty kings in perpetual warfare among themselves for the supremacy over the Northern and Southern Empires, and devouring each other's nomes; the different animal gods as merely the totems of the various tribes and nomes.

Set, a great king belonging to the first dynasty, was one of these. The animals by which Set is symbolised are the black pig and the serpent, and his companions and chiefs are represented by the hippopotamus and crocodile; and where, in a very much later inscription, the Horus King is seen cutting up a hippopotamus and dividing the parts among the other gods, it is thought to have reference to a war in which the followers of Set were defeated and the hippopotamus nome was divided and distributed among the victors.

How Set came to have charge over the ladder to heaven and immortality is difficult to reconcile with a Mesopotamian origin, unless the ladder was the necessary means of entering the great "Kufa" or Ark which rode the Waters of Death and gained immortal life for its inmates. What the great central nave of the Osireion may typify—ark, throne of Osiris or ultimate heaven—or indeed what the true meaning of the whole wonderful structure may be, we shall not know until the pool has been cleared and the central block examined; and there is no one more anxious than Professor Naville is himself to complete his marvellous discovery. But it is a very expensive undertaking and the coffers of the Egyptian Exploration Society could not bear the strain, so unless some generous enthusiast will come to the rescue, the Osireion must hold its secret of well nigh 5,000 years yet longer.

RECORDS OF THE TOMBS. VIII

TOMBS AND SCULPTURES OF NAKSHI RUSTAM

By Reuben Levy, M.A.

TOMBS AND SCULPTURES OF NAKSHI RUSTAM

By Reuben Levy, M.A.

Lecturer in Persian in the University of Oxford

As one rides along the valley north-west from Persepolis, amidst wild and rocky scenery, there appears carved in the high mountain wall, about ten miles from that ancient city, a series of four huge crosses cut deep in the rock. These, with the sculptures carved under them, are known to the Persians as Nakshi Rustam, or "The Picture of Rustam," from the fact that the inhabitants of the country saw illustrated in the figures incidents from the life of that mythical hero, who, under a feigned name, met his son Sohrab in battle and slew him, a story well known from Matthew Arnold's poem "Sohrab and Rustum." We now know from an inscription on one of the tombs that it is that of Darius Hystaspes, the other three being those of the three succeeding members of his dynasty, the Achæmenid, that ruled ancient Persia from 558 to 331 B.C.

Near approach to the tombs shows them to be cut out high up in the face of the almost perpendicular cliff. Each is in the shape of an upright cross, with a disproportionately broad transverse section set across the middle of the upright and about a third of it in width. The total height of each—and they are all practically identical in outside appearance—is roughly 74 feet, while the transverse part is over 57 feet long. Glancing up at one of the crosses, one sees that the lowest limb is a smooth surface left uninscribed, with the bottom forming a kind of giant's bench. The middle section of the cross, which passes over this lower limb, looks like the façade of a palace, with a pillared colonnade, all sculptured out of the living rock. A lofty doorway is

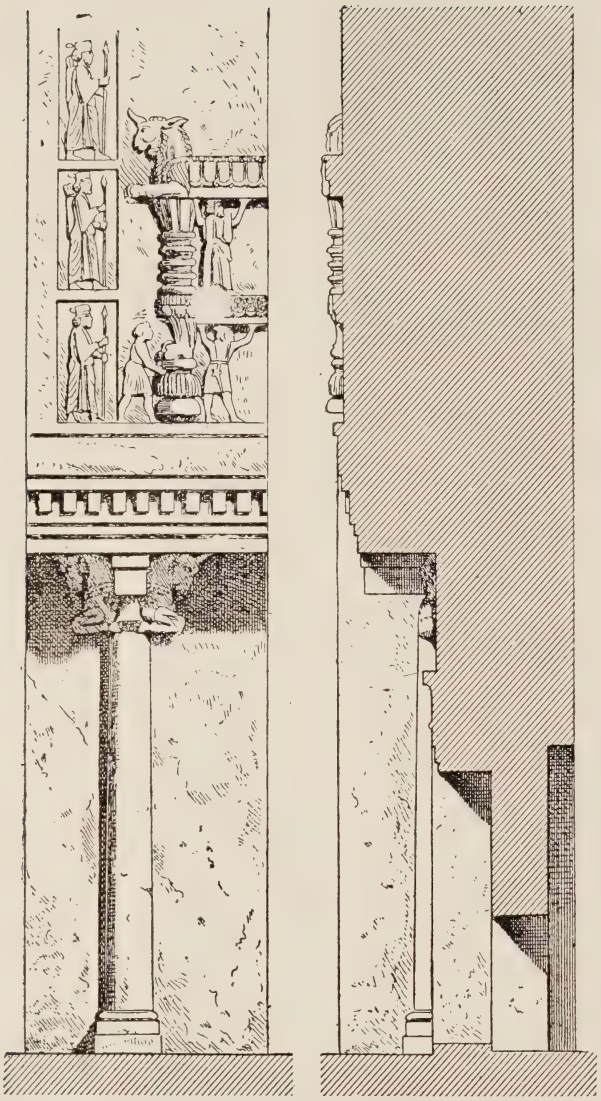
carved in the middle of it but there is no door, the upper part being blocked by a solid mass of rock, and there is only a low aperture at the bottom where someone has broken into the tomb. On each side of this doorway are two round pillars cut from the rock, but attached at the back. They are set about 7 feet apart, with the end ones about the same distance from each of the outer walls, and they rest upon plinths that project slightly from the very narrow platform that is their base. Each pillar is crowned with the favourite Old Persian ornament of two bulls' heads placed back to back and with a single horn projecting from the forehead of each. Between the bulls' necks is placed a square stone upon which rest two others. These additional capitals support what, in a building, would be the architrave, or main beam supporting the roof, but which here is a long piece of carving cut out of the rock. There is no stairway or ramp up to the tomb, and indeed it was intended by the smoothing of the lower limb of the cross to make entrance to the tomb impossible without special apparatus. We are told by the historian Diodorus, in his description of some tombs similar to these, that there were avenues to them, and that some form of hoist or other apparatus was devised to haul up corpses and deposit them in the rock chambers. Another historian, Ctesias, relates with regard to the making of the tombs that Darius Hystaspes had his own tomb dug during his lifetime. When it was completed, and he wished to inspect the work done, the Chaldean soothsayers informed him that some terrible misfortune would overtake him if he entered the tomb while he was still alive. This prevented the king from seeing where he was to lie, but some princes of his family, who were overwhelmed with curiosity and were not to be deterred from seeing the inside of the tomb, ventured out to the mountain and had themselves drawn up by the Zoroastrian priests whose altars were near there. While they were in mid air some serpents appeared on the rock and so terrified the priests that they let go the ropes they were holding, and the princes were dashed to pieces. To any subject of the Achæmenid king passing by, the sight of the tomb high up and inaccessible to him must have had the effect of adding to the awe and reverence he already felt for the reigning dynasty.

Modern travellers, such as Sir R. Ker Porter, have gained

Photo by Eliot Crawshay-Williams.

TOMB OF A PERSIAN KING DEEP-SET IN MERVDASHT ROCK

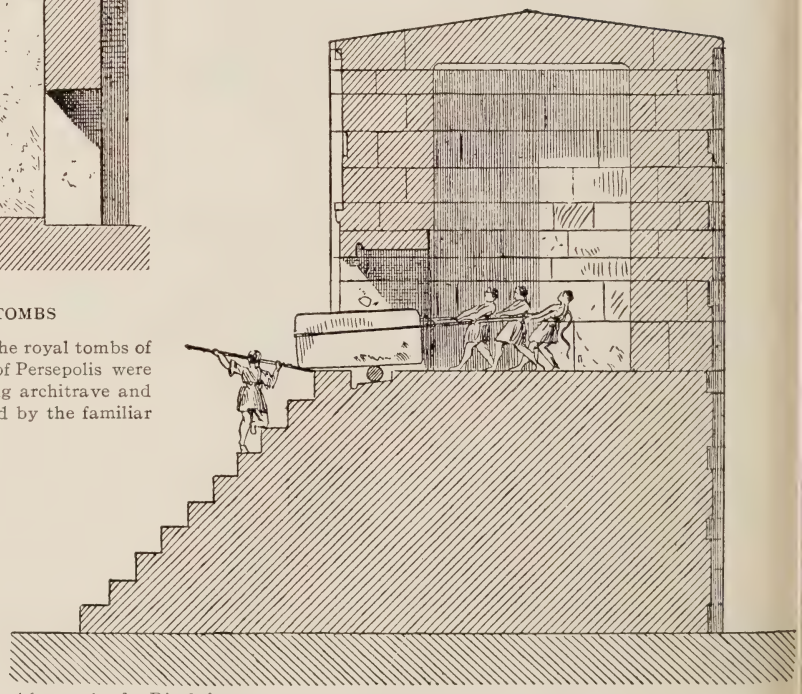
High above the ground, mysterious and inaccessible, the four rock recesses are not the least of the wonders of the Persepolis country. Legend connects them and the reliefs below them with the mythical heroes Sohrab and Rustam, hence the name Nakshi (the picture of) Rustam. They are, in fact, the tombs of Darius and his successors, Xerxes, Artaxerxes and Darius II.



From plans by Flandin and Coste.

ARCHITECTURAL DETAIL OF THE TOMBS

This elevation and transverse section of one of the royal tombs of Nakshi Rustam clearly show how the pillared halls of Persepolis were constructed. The rock-cut imitation of projecting architrave and beams (of cedar wood in the palaces) is supported by the familiar bull-headed columns.



After section by Dieulafoy

STRANGE TOWER KNOWN AS "ZOROASTER'S KA'BA"

This restoration section of the square funerary tower of Nakshi Rustam has been constructed to show the purpose of the building. In the threshold slab are two parallel slides on an inclined plane, in which rollers were placed to facilitate the introduction of the stone sarcophagus.

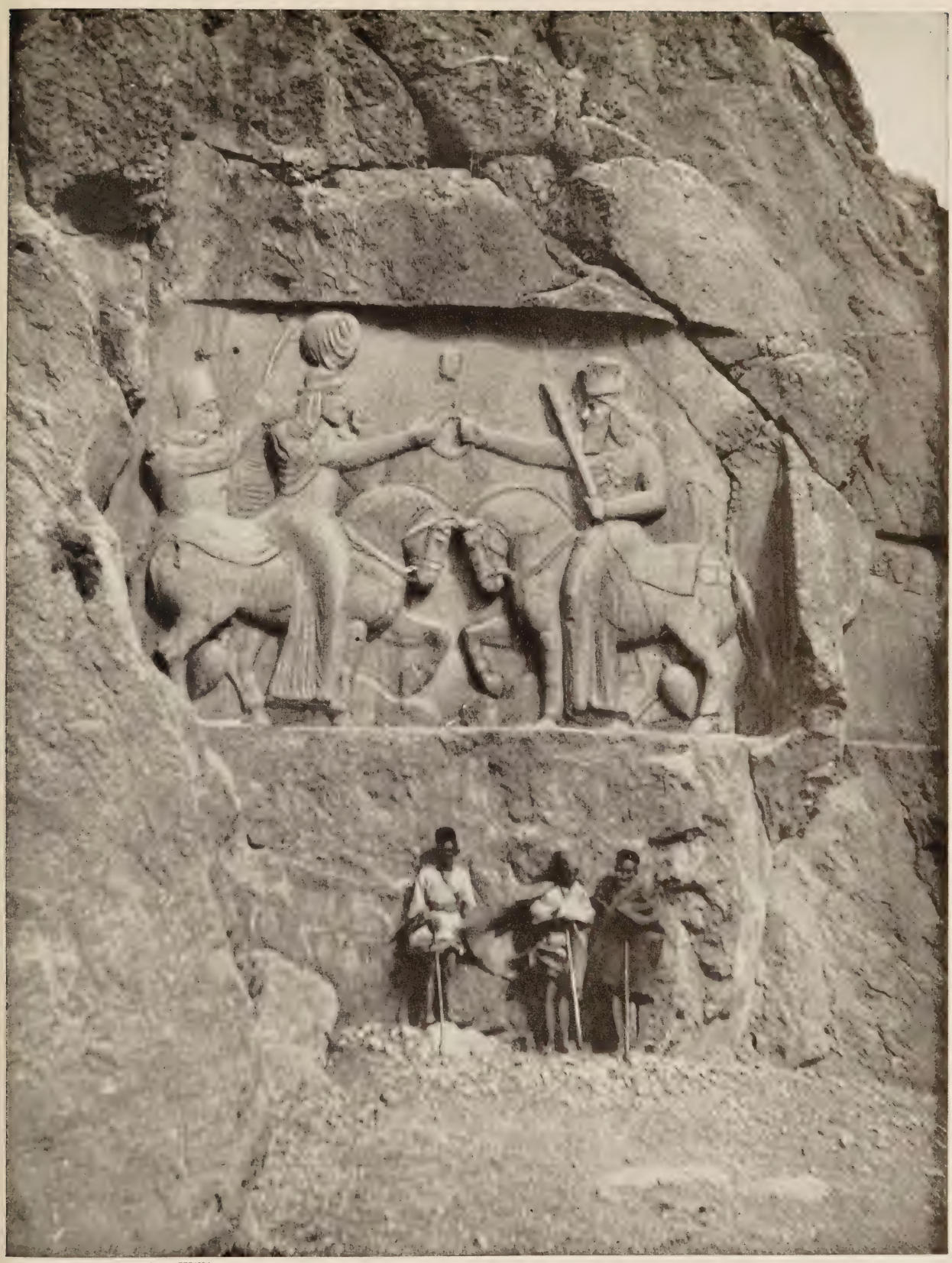


Photo by Eliot Crawshay-Williams.

ARDASHIR RECEIVES THE BENEDICTION OF AURAMAZDA

Not only for its tombs is Nakshi Rustam a place of profound archælogical interest, for there, too, are seven great reliefs cut in the rock by Ardashir Babakan and his successors in the Sassanid line many centuries after the Achæmenids. This, the westernmost relief, depicts a symbolic episode in the life of King Ardashir, who reigned from 212 till 241. The god Auramazda (right) extends to Ardashir the emblem of his kingship; the king's horse tramples under foot the Parthian foe Artabanus, and the god triumphs over the prostrate Ahriman, spirit of evil. In contrast to the horses of warlike scenes, these animals are crude and lifeless.

Photo by Eliot Crawshay-Williams.

PERSIA'S TRIUMPH IS ROME'S ABASEMENT

To the west of the tombs of Darius and of Xerxes is found this Sassanian relief. When, in A.D. 260, the Roman Emperor Valerian led his expedition into Syria, his army was routed and he himself captured by the Persian King Sapor who here celebrates his triumph. The exultant king advances towards Valerian, who is shown kneeling in an attitude of pleading subjection before the royal charger, and in lofty scorn Sapor grants to the standing Cyriadis a boon refused to Cæsar.

access to the tombs, using stout ropes carried up by natives of surrounding villages who climbed up the crevices made in the rocks by treasure seekers and others; but superstitious fear generally keeps the Persian from entering the tombs. Each of these, when entered by the aperture in the doorway, is found to be a narrow chamber running along behind the transverse section of the outside cross and corresponding to it in height and length. In the side opposite the doorway, are found a number of deep cavities cut in the rock for the reception of the royal bodies or coffins, and at a height of about 3 feet from the ground level. In none of them have any remains or relics of burial ever been found and it is more than probable that they were long ago ransacked by thieves, in spite of the heavy lids of stone which still cover some of them even now.

When one descends again to the ground and looks up to the topmost limb of the cross, one may see sculptured the picture of a religious ceremony. On the face of the upper section of the cross, above the front of the tomb, is carved the figure (about 8 feet high) of Darius—some say of a priest—in a long robe and tiara, standing on his throne. He is in the act of worshipping before an altar where the sacred fire is burning. Between him and the altar there floats the emblem of Auramazda (Ahura Mazda) borne on wings and with a representation of the sun behind it. The throne and the altar rest upon a beautifully carved frieze which is shown as a kind of platform resting upon the heads and upstretched arms of a row of fourteen figures about 5 feet high. These represent the various peoples of the empire, and they in their turn stand upon a similar frieze resting upon another row of fourteen figures of the same dimensions and of like significance. Two strangely carved columns each surmounted by the head of a unicorn-bull form supports for this double platform, and the whole of the sculpture has a frame cut round it in the rock.

One of the tombs—that of Darius—has a long inscription in the cuneiform character of three languages—Persian, Elamite and Babylonian. This covers a great part of the available space in the upper part of the cross and also a good deal of the space between the pillars.

The first two paragraphs of this inscription read:

"A great god is Auramazda, who created this earth, who created yonder heaven, who created man, who created welfare for man, who made Darius king, one king of many, one lord of many.

"I am Darius the great king, king of kings, king of the countries possessing all kinds of people, king of this great earth, far and wide, son of Hystaspes, the Achæmenid, a Persian, the son of a Persian, and Aryan, of Aryan descent."

The other three tombs are without inscriptions, but from the resemblance they bear generally to that of Darius and from other facts of history, it may be inferred that they are the last resting-places of the great king's successors, each of whom made his tomb during his own lifetime.

Under the tombs and close to the ground are seven tablets containing inscriptions and some fine carvings. These are many centuries later than the tombs, originating from the days of the Sassanians, a line of Persian kings who after about five hundred years of foreign rule and anarchy renewed the glories of the Achæmenids in their native land. The first of these, Ardashir, ascended the throne in A.D. 226. Both he and his successor, Sapor (Shapur) I., who assumed the sovereignty about fourteen years later, were engaged in a constant struggle against the Romans.

In A.D. 260 Sapor succeeded in capturing the Roman Emperor Valerian, who had led an expedition against him in Syria. This filled the Sassanian king with triumph, and he commemorated his victory by stone carvings both at Shapur and at Nakshi Rustam. At the latter place the middle panel of the seven is the monument which celebrates the event. It is a great carving over 35 feet long and about 16 feet high. The chief figure on the carving is a greater than life-size image of Sapor, who is shown on horseback receiving homage from two captives in Roman attire. Upon the Shah's head is a crown shaped like a circular tower, in which rests a large balloon-shaped object. His face is exquisitely carved, and would seem to be by a different hand from the rest of the work. He is dressed in a short robe clasped at the waist by a girdle, and in true Aryan fashion he is wearing trousers of the loose kind now known as "shalwar." His left hand grasps the hilt of his sword which is attached to his belt, while his right is stretched out between the hands of one of the two cap-

Photo by Eliot Crawshay-Williams.

THE WARLIKE BAHRAM GUR IN AN UNFAMILIAR RÔLE

Situated between the supposed tomb of Darius II. and that of Darius I. is this fine relief. Its special interest is that it contains the only known representation of a female figure found in such carvings in Persia—the figure shown on the right, unmistakable in its contours. Some authorities assert that this relief commemorates the marriage of Bahram (the "Wild Ass" of Omar Khayyam), who, supported by a retainer, stands in the centre clasping one side of the royal circlet of which the other side is held by his queen.

Photo by Eliot Crawshay-Williams.

LEVEE OF AN OLD-TIME KING OF PERSIA

Among the less pretentious of the Nakshi Rustam reliefs is this, the sixth counting from the tomb of Darius II. at the eastern end. Lord Curzon, whose knowledge of Persian archæology is profound, asserts that the sculptures represent Bahram II. as the full-length central figure among his courtiers who stand behind barriers, but other authorities maintain that the frieze is unfinished, having been worked from the top downwards, and the lower parts of the minor figures unworked as yet. The oblong blank space underneath, obviously meant for an inscription, certainly supports this theory.

MAJESTIC TOMBS OF DARIUS AND HIS LINE, SET HIGH IN THE DESERT ROCK

At first sight but great crosses deeply recessed in the rock, gazing over the plain to the long silent ruins of Persepolis, these magnificent sepulchres reveal on closer inspection a wealth of detail. The bases are about 30 feet from the ground and their top branches tower 100 feet up the cliff; flanked by the lateral limbs, each 35 feet in length, the central ledge at their foot is occupied by four pilasters crowned by bull-headed capitals supporting a great moulding and the symbolic frieze described in the text. Three of the four tombs are shown, and of these the only one whose identification is incontrovertible is the one on the extreme right, which we know by its cuneiform inscription to be that of Darius I.: the others contained the bodies of Xerxes, Artaxerxes, and Darius II., but in what sequence is not known.

tives in front of him who is standing with arms outstretched in a posture of submission. The other captive, who is the Roman Emperor, is kneeling before the Shah with hands extended as though in appeal.

Behind the king stands a tall figure with a beardless face, probably a eunuch, sternly holding up a hand to enjoin silence. Upon his head he wears a kind of mitre with flowing bands behind, and there can be little doubt that it represents a tall hat of felt of the kind now commonly worn by many Persian tribesmen.

Three others of the seven sculptures represent, in spirited fashion, the figure of the famous king Bahram Gur, the "Wild Ass," in single combat with a Tartar chief. Still another of the seven tablets is accompanied by an inscription in Greek and Pehlevi, or middle Persian. It represents Auramazda, the Zoroastrian god of good, investing Ardashir (Artaxerxes) Babakan, the first Sassanian king, with the "cydaris," or ancient emblem of kingship. The victory of both god and king is indicated, for Ardashir reinstated the religion of Auramazda which had for long been ousted by the foreign faith of the Parthians, and this is represented by a figure prostrate on the ground under the feet of the god's horse. The figure which Ardashir's horse tramples under foot pictures Ardawan, the last of the Parthian dynasty, whom the king overthrew, thus placing a Persian sovereign once more upon the throne of Persia after five centuries of foreign rule. Of the remaining bas-reliefs some are practically indistinguishable, while the rest are of little importance.

Two Zoroastrian altars and their platform, cut out of one piece of rock, and a very solidly-built square building, which the inhabitants of neighbouring villages call "Zoroaster's Ka'ba" and which may be another tomb, complete the number of notable antiquities included by the Persians under the name of Nakshi Rustam.

THE WONDER CITIES. XXI

JERUSALEM UNDER HEROD THE GREAT

By J. Garstang, M.A., D.Litt., D.Sc. (Oxon)

JERUSALEM UNDER HEROD THE GREAT

By J. Garstang, M.A., D.Litt., D.Sc. (Oxon)

Director of the British School of Archæology at Jerusalem and of the Department of Antiquities for Palestine, Professor in the University of Liverpool

AMONG the numerous transformations that Jerusalem has undergone from its foundation in the far-off days of the Jebusites until to-day, none was more radical than that accomplished by Herod the Great. At this epoch, it may be said, the old order changed and a new Jerusalem came into being. The general arrangement of the city still reflected the ancient civilisation and conformed with customs and institutions established by the Israelites, but already the seeds of Hellenism were taking root and the new order was becoming visible above the soil—indications of a more vigorous civilisation, destined soon to overrun the old. Even the temple itself, at the culmination of its splendour, took now an entirely new æsthetic appearance, under the dominating influence of Hellenistic art in that stage of development which is familiarly called "Græco-Roman."

It is this Hellenised Jerusalem of Herod the Great that interests Christendom most profoundly, for it was the Jerusalem of Christ. Many would like to visualise the city as it then was, or at least to know, if not to see, what remains in fact of that period. Yet the inquiry is not easy and most of the fanciful reconstructions of the Holy City, however well intentioned, are not to be trusted. The historian Josephus has indeed left us very precious descriptions of various features—palaces, monuments, ramparts, canals, water systems, tombs and so on—but the literary sources still require more critical examination or await a final collation with the archæological remains upon the site. And the re-

cognition of these material remains is no easy task, involving the presence of a trained archæologist and a life devoted patiently to investigation. For years little or no excavation has been possible, and the results already obtained by the learned Dominican Fathers of the Ecole Biblique (now the official Archæological School of France in Palestine) have only been gleaned as and when public works or other enterprises within the city have afforded the opportunity.

The casual visitor, familiar with contemporary monuments of antiquity elsewhere, splendid alike in their preservation and character, such as those in Thebes, Athens, Pompeii, and Timgad, might look in vain for any material trace of Jerusalem in its glory. He will see, quaintly picturesque but not reflecting in any sense the period of his search, a medley of constructions without character, or of modern buildings leaning against others of Arab or medieval origin, themselves perhaps superimposed upon Byzantine foundations or covering the remains of the Roman "colonia" of the second century. It will appear to him as though the Jerusalem of Herod was not only destroyed but utterly effaced by the legions of Titus in 70 A.D. Of the temple itself not one stone is visible upon another; the magnificent monument that now rises in the sacred enclosure was the later creation of Christian architects working for the first Mussulman Khalifs, decorated according to the taste and tendencies of Islam. Even the few remains of the period that the visitor will see will probably be so obscured and out of setting that he is likely to be more impressed by such foolish modern names as the "Tower of David" or "Herod's Palace," and to preserve the image of the structures so named, however involuntarily, in any mental picture he may have formed of the Holy City.

The remains of the period on which correctly to base the outline of such a picture are indeed very few, and they may be rapidly indicated. First, we have the great ashlar walling founded on rock, and some column bases in position, preserved in the basement of the Russian institution near the Holy Sepulchre; secondly, there is the similar massive masonry or drafted stones forming the lower visible courses of the corner of the temple enclosure (the Haram of to-day), stretching from the spot known as the Wailing Place of the Jews, past "Robinson's

Photo from Prof. Garstang.

FOUNDED BY HEROD BUT CALLED THE "TOWER OF DAVID"

Probably few ancient cities have so suffered from haphazard nomenclature as Jerusalem; at every turn there are names that seem to take us back to the days of the kings and earlier, whereas in fact the remains of even the Jerusalem of Herod's time are not numerous. Such is the "Tower of David" in the citadel, claiming by its title a specious glamour of antiquity—though the lower courses prove their Herodian character by massive size and drafted joins, so that by ordinary standards they are old enough.

Photo by Underwood Press Service.

WHERE JEWS MOURN THE RUIN OF THEIR ONCE GLORIOUS TEMPLE

On the western wall of the Temple enclosure, now the girdling wall of the Haram el Sherif, is a spot where devout Jews gather once a week to bewail the destruction of the Sanctuary. There, they believe, are stones from the original Temple of Solomon, and indeed it may be that some such are buried beneath later masonry; but as they stand, the magnificent blocks visible in this photograph are undoubtedly part of the structure built by Herod the Great, father of that Herod before whom Christ was tried.

Photo by F. M. Good.

JERUSALEM, THE CITY IN THE ABUNDANCE OF WHOSE GLORY ISRAEL TOOK DELIGHT

Apart from its religious significance, and even leaving out of account its claim to unsurpassed literary style, the Bible is a most fascinating historical document; and in it no more enthralling tale is unfolded than that of the chequered story of Jerusalem. Her beginnings are shrouded in a mist of interesting conjecture; she was early peopled by the Jebusites, a tribe thought to be of Semitic origin from the name of one of their kings, Adoni-zedek. We know from Joshua xv. 63 that, in spite of being surrounded by the people of Israel, the Jebusites could not be expelled from the city, and indeed there is no record of their expulsion, it being accepted that they were later merged in the Israelites. This view is from the Mount of Olives, east of the city; in the left foreground is the Tomb of Absalom and the Mosque of Omar is seen rising above the Haram el Sherif.

Photo by F. M. Good.

INSEPARABLY LINKED WITH A FAITH NOW SPREAD OVER THE WORLD: JERUSALEM, CAPITAL CITY OF JUDAH

As in the remote days of its early foundation, so in later times, the history of Jerusalem is a sad story of alternate triumph and fall, glory and despair. Just before the dawn of the Christian era her king was Herod the Great, infamous in Biblical history for many acts of cruelty (though the authenticity of the story of the massacre of the Innocents is questioned to-day); he rebuilt the great Temple and aimed at Hellenising the city, encouraging Greek teachers to settle within its walls. Not long after his death (A.D. 6) the city's abasement touched its nadir when, in A.D. 70, Titus captured it and enslaved its people, making it thereafter a "colonia" of Rome to which access was denied all Jews. Shown above is the north-east end of the city (Benzetha), with Mizpeh in the distance; the roads converge to S. Stephen's Gate. The supposed Garden of Gethsemane lies in the left foreground.

Photo by the British School of Archæology at Jerusalem.

RELICS OF AN HERODIAN VIADUCT

Just south of the Wailing Place of the Jews, and not far from the south-west corner of the Haram enclosure, are remains of a bridge that once spanned the Tyropœon valley. On the outer side of the present wall these remains are known, after their excavator, as "Robinson's Arch"; and on the inner side, shown here, a pier and the spring of a span may still be seen.

Photo by the British School of Archæology at Jerusalem.

"TOMB OF ABSALOM," A LINK WITH HEROD'S DAYS

Looking across the Kidron valley towards Ophel are three rock-hewn funeral monuments that undoubtedly date from Herod's time. Of these the so-called "Tomb of Absalom," square in shape and surmounted by a concave cone, is only carved in the solid rock as far as the cornice, above which it is built up of beautifully worked stone.

Photo by F. M. Good.

FINE STONEWORK OF THE RUINED SYNAGOGUE OF ESTHER

In consequence of the lavish embellishments whereby Herod the Great Hellenised Jerusalem, followed after about a hundred years by its destruction in A.D. 70, its subsequent transformation into a Roman colonia under the name of Ælia Capitolina, its reinstatement in Byzantine times as the centre of Christianity, its capture by the Mahomedans under Omar in 637, and all the later flux and reflux of the Crusades that have left it a Moslem city since 1244, there are but few ruins that suggest the original home of the Jewish faith. The fine stone moulding, however, of this ruined synagogue at Kefr Birim on the Sea of Galilee, fabled to be the burial place of Queen Esther, shows the blend of East and West that was evolved.

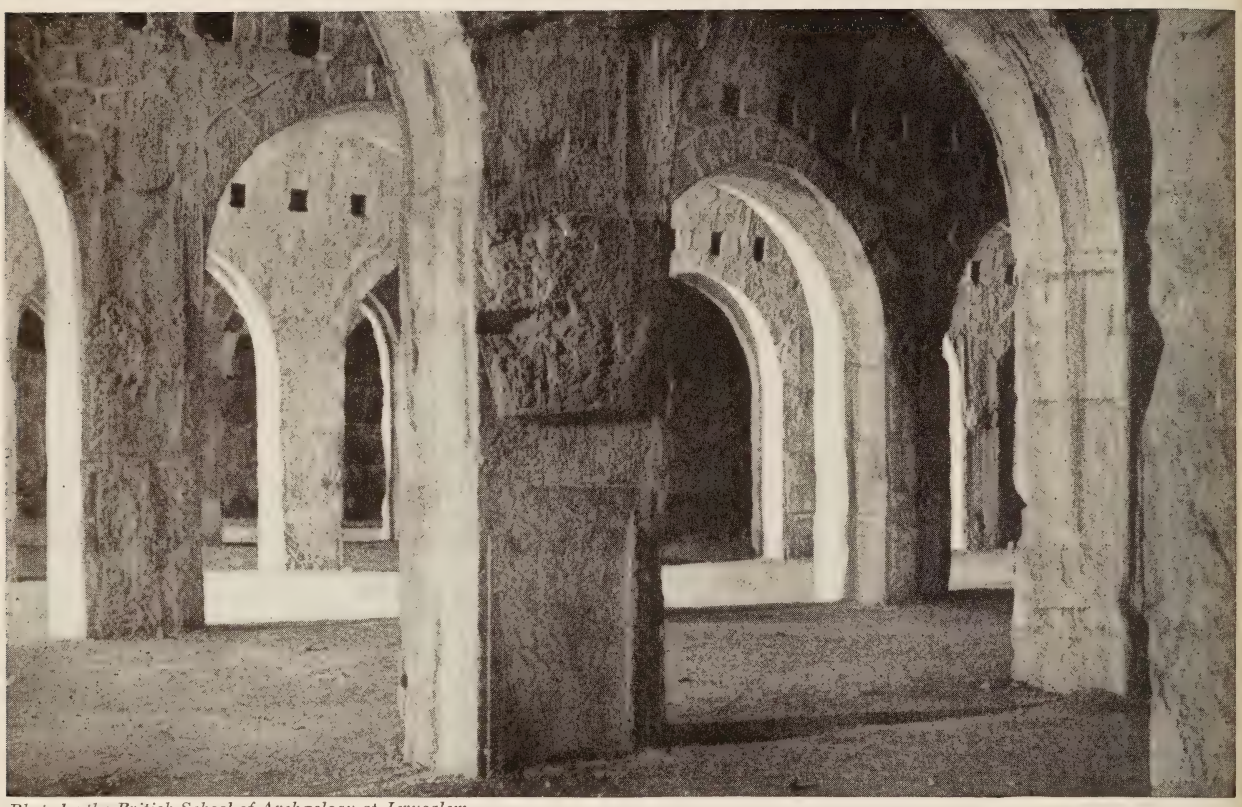


Photo by the British School of Archæology at Jerusalem.

VAULTED "STABLES OF SOLOMON" BENEATH THE TEMPLE COURT

From time immemorial, in order to provide a large and level site for the temple, the summit of Mount Moriah must have been extended by substructures; but the existing vaulted chambers known as "Solomon's Stables," just inside the wall by "Robinson's Arch," appear to be even post-Herodian. For in the foreground a Roman capital may be seen built into a square column, and the arch itself (visible here in the left background) is incorporated in the structure of the wall.

Arch," around the south-west corner and along the south wall as far as the south-east corner of the enclosure; thirdly, similar masonry is also to be seen in the citadel enclosure, particularly the foundations of the "Tower of David"; fourthly, there are certain walls and buildings already excavated on Mount Ophel, the ridge that leads upwards from the Pools of Siloam to the temple area; and finally, traces of a Jewish quarter may be found on the eastern slopes of Mount Zion overlooking Ophel.

In this short list of Herodian remains we have not included the well-known "Ecce Homo Arch" in the "Via Dolorosa," a striking monument of the Roman age, but to be fitted only doubtfully and with difficulty into the picture of Herod's Jerusalem that we are striving to create. These authentic remains are few indeed; they may be counted on the fingers of one hand. In the mind's eye they must be enclosed not by the mediæval walls of the modern city, but by a circuit reaching farther to the south enclosing the ridge of Ophel and the hill of Zion. In this circuit the foundations of the citadel and the portions of wall adjoining, together with the line of the opposite eastern wall east of the Haram el Sherif, are the only present landmarks. The northern wall is more doubtful. It has often been argued that the present north wall preserves the general line; but it is to be pointed out that the remains visible in the basement of the Russian Hospice, the origins of which are traceable to the period of Herod, were adapted to all subsequent transformations of the city, in particular to the Forum of Ælia Capitolina and the Temenos of Constantine. Their presence and character may be taken to indicate the limit of the city to the north-west in the time of Herod. With the city wall so uniting and enclosing the visible remains of the period which have been mentioned and the rest of the area still blank in the mental picture we are striving to create, we may now proceed to fill in the plan with general indications and certain details culled from ancient writers or from the results of topographical research.

To the north of the hill of Zion, that is to say in the vicinity of the present citadel and the Tower of David, rose the Palace of Herod, a vast series of luxurious buildings adorned with colonnades and peristyles, courts and gardens. The general scheme of arrangement was apparently Oriental, but the style and

decoration probably differed little from an Alexandrian palace of the later Lagides. This inference is based on the character of architectural fragments accidentally discovered. Excavations have still to uncover this, one of the most famous and most imposing buildings of the period. On the same height, but towards the east, arose the palace of the Hasmonean princes; it would seem to have preserved its local Jewish aspect, but little or nothing material is known about its fabric. Farther south (beyond the present wall) on the easterly slope of the same hill of Zion, clearances have brought to light (under the Byzantine levels and the Roman remains of the period of Ælia) traces of an interesting Jewish quarter of the age of Herod, including streets, dwellings, store-rooms, a mill and other features.

Farther east, beyond the depression that still marks the exit of the Tyropœon valley, rises the gentle slope of Ophel, which leads up from the Pools of Siloam by the side of the Brook Kidron, as far as the present southern wall of the city. This historic site is now to be excavated under the auspices of the present administration of Palestine, which has invited the collaboration of all archæological societies within the League of Nations. All the educated world, Christian, Jew and Moslem alike, will follow the progress of discovery with living interest. We are told that the crest of the hill was levelled in the Roman age to facilitate the development of the city plan; but it would appear that the statement refers to the upper part, possibly indeed that which now lies between the Haram and the city wall, where the Stadium of Ælia was constructed. It may be hoped, and no one can realise this without some emotion, that it still remains for the excavator to uncover the traces of the ancient fortress of the Jebusites, of the first City of David, and maybe the tombs of the Kings of Judah. Of Herod's work there is little trace as yet, but from the indications still visible it may be believed that Herod had already arranged and decorated the approaches to the Pools of Siloam in the style of the Roman Nymphæum of Jerash or of Amman, beyond the River Jordan.

Overlooking Ophel from the opposite slope of the Kidron valley, above the modern village of Silwan, there are to be seen three splendid funerary monuments which may be attributed with some certainty to the period of Herod the Great. These

After the painting by H. C. Selous, by courtesy of the London Society for Promoting Christianity among the Jews.

CITY OF JOSHUA, DAVID, SOLOMON, HEROD—

In this reconstruction of Jersualem as it was under Herod the Great, we are supposed to stand on the Mount of Olives and gaze over the Kidron valley in the foreground, over the great Sanctuary and the Upper City beyond, out to where the horizon hides Joppa (Jaffa) and the distant sea. Occupying the centre of the panorama is the Temple of Herod with its courts and buildings spread out on the summit of Mount Moriah, and the grim fortress of Antonia which Herod built to guard it and to serve as a secondary citadel—so soon to stand the ghastly siege of A.D. 70. In the nearer wall of the enclosure is the Shushan Gate facing a causeway over the Kidron. Below the south

—IN THE DAYS OF ITS ULTIMATE SPLENDOUR

wall of the temple on the left lies Ophel, the Zion of David and the Jebusites, and behind it the Tyropœon valley spanned by "Robinson's Arch" at the south-west corner, and "Wilson's Arch" farther north. On the opposite or northern side beyond Antonia lies the quarter known as Bezetha. Lying round the Tyropœon valley is the Lower City with the Upper City, or Jerusalem proper, on the height beyond; it is crowned in the left distance by the towers of Herod's Palace and drops steeply away to the valley of Hinnom or Gehinna.

are known familiarly by the names: the Tomb of Absalom, the Grotto of S. James and the Pyramid of Zacharias. Though forming a group, and contemporary in date, these tomb structures present an interesting variety of design and treatment. The first is square in plan, carved in the living rock as far as the cornice from which point it is built up of good ashlar blocks. Above the architrave the square plan gives way to a circular structure which is bound together as it were by a rope moulding and is crowned by an incurving monolithic peak. The four sides of the solid base are decorated with an Ionic façade, two columns between the corner pilasters, while a frieze of design familiar in other tombs of Roman character that may be seen in the district round Jerusalem completes the somewhat severe and dignified scheme of decoration.

The Pyramid of Zacharias is similar in general design but it is entirely carved in the living rock. The cornice curves outwards in Egyptian fashion and the whole is surmounted by a plain pyramid giving a further Egyptian suggestion. The Grotto of S. James, which lies between these two monuments, is altogether different in character, being hewn in the cliff face with even a rock-carved portico, this time of Doric character, recalling the rock tombs of Beni Hasan in Egypt and similar structures of Lycia in Asia Minor. Each tomb thus has its special character, and the three form a group of unique interest among the numerous varieties of tombs around Jerusalem. Further, it is to be gathered from a passage in Josephus that these tombs, the two former at any rate, are to be attributed to Queen Helen of Adiabene, the devout lady who sent corn from her modest kingdom near the Euphrates, in northern Mesopotamia, to the relief of Jerusalem in the time of famine mentioned in the Acts of the Apostles; for after her son's accession her body and that of her brother were sent to Jerusalem to be interred in the "pyramids" which she had constructed; these, we are told, were three in number, and they were three furlongs outside the city. No other funerary monuments or tombs around Jerusalem answer nearly so well to this description, and though only one can properly be called a pyramid and their distance from the nearest point of the city wall as it was then can only have been one or two rather than three furlongs, yet the description and indications are rela-

tively so detailed and suggestive that the accuracy of the identification can hardly be doubted. These monuments may accordingly be attributed to the period under review with as much certainty as any other antiquities of the site.

When we approach the city wall again at the Golden Gate, a doubt must arise as to the origin of this entrance which, notwithstanding the visible traces of reconstruction and remodelling, remains one of the most beautiful vestiges of antiquity in Jerusalem. The structure in general may be recognised as Byzantine work of the seventh century A.D., but doubtless it stands upon the foundations of the Shushan Gate of the time of Herod, and has embodied a number of features of that period of the temple. Two massive monoliths, originally door jambs, are now used as pillars, rising actually above the level of the top of the wall. Their proportions recall again the pillar which still lies prone in the enclosure of the Russian cathedral to the north-west of the city.

Passing within the sacred enclosure no traces of Imperial work greet the eye. The platform itself is much higher than aforetime, so that even the embers of the awful fire kindled by the soldiers of Titus lie buried deeply below an artificial accumulation of subsequent ages. Recent trenching done for purely practical purposes by the Moslem authorities failed to disclose more than a few detached and meaningless worked stones, though the cuttings penetrated the bed of chips and débris in places to a depth of 3 metres. Even at the lower level found in the stables of Solomon (surely, by the way, a misnomer for Suliman), though the wonderful system of vaults which carries the southern extension of the platform is traditionally very ancient, it is none the less impossible to assign the work as a whole to the period of Herod's temple. For there may be seen buried in the structure, and no longer serving any purpose in the new scheme, the inner continuation of that Imperial viaduct that united the temple area to the western hill, over the Tyropœon valley; this viaduct is well indicated and well known from the remains familiarly called "Robinson's Arch," visible in the external masonry of the enclosure. The masonry of this arch, the Imperial character and date of which are not disputed, and its relation to the main wall of the temenos, indicate that the

Photo by Donald McLeish, specially coloured for "Wonders of the Past."

ARAB SPLENDOUR AND CLASSIC GRACE IN THE HARAM EL SHERIF

A special chapter in this work is devoted to the Temples at Jerusalem; to-day all that remains of that majestic succession of buildings is the level wall-girt platform on the summit of Mount Moriah, the Haram el Sherif. The Mosque of Omar, or more correctly the Kubbet el Sakhra (Dome of the Rock), which stands in the centre, is Moslem work of the seventh century; but a glimpse of an epoch closer to that with which we are here concerned is afforded by the arcades round the mosque platform, with their ornate Corinthian column-capitals—obvious elements from architecture of an earlier date.

Photo from Prof. Garstang, specially coloured for "Wonders of the Past."

MARTIAL BATTLEMENTS OF JERUSALEM'S TEMPLE HILL

At various points round the walls of the Haram or Temple platform there is much that proclaims by the character of the masonry a connexion with the days of Herod and of Rome. The Golden Gate, for instance, a beautiful structure of Byzantine work in the main, almost certainly occupies the site of the Shushan Gate of Herod; and in its foundations and its lower courses there are features that betray a Roman origin.

lower courses in this sector of the enclosing wall of the temple area are an original structure of Herod the Great. In it perhaps there lie embedded the enclosure and some features of the age of Solomon, but even this is doubtful. The masonry conforms essentially in character and setting with other temenos walls of undoubtedly Herodian character, particularly that of the Mosque of Hebron that encloses the cave of Machpelah and the traditional cenotaphs of the patriarchs.

But the focus of our interest is the temple, the site of which is certainly the Haram el Sherif, enclosed by the walls we have described. The Sacred Rock that outlasts all human endeavour to embellish or enclose it is covered at present by The Dome, a splendid example of mediæval art that now marks by another turn of the wheel the second shrine of Islam. The enclosure itself has been altered and remodelled; nevertheless, contemporary archæology—thanks particularly to the researches of the Palestine Exploration Fund (1864-9)—is able to discriminate the phases of its evolution. Careful and detailed comparison with masonry unquestionably of the period of Herod (particularly the Haram of Hebron mentioned above) enables us to regard with some certainty as portions of the Herodian enclosure the lower part of that magnificent stretch of the present wall from and including the Wailing Place of the Jews (itself perhaps indeed of earlier origins but now reconstructed), past Robinson's Arch, round the south-western corner of the enclosure, and all along the southern wall as far as the return of the south-eastern corner. This and the Rock itself are the most tangible remains. Several columns and decorated fragments to be seen in "Solomon's Stables," and certain other indications, such as the column that still rests in its quarry bed (like that greater one of Baalbek) in the compound of the Russian hospital and cathedral, provide the architect with elements from which to reconstruct in theory, but with a degree of certainty that warrants the attempt, the great southern portico, called historically the Royal Basilica, the most monumental of all the porticoes with which the esplanade was embellished at this period.

In an attempt to realise the style and decoration of the Sanctuary itself in the age of Herod, which the tests enable us to

restore in considerable detail, we must be guided by the architectural decoration of numerous contemporary buildings: the temples of Si'ah and of 'Araq-El Emir in Trans-Jordania, the Haram of Hebron already mentioned, as well as numerous examples or ruins typical of the Syrian Basilica, Agora, Stadium, Baths and so on in other Herodian towns of Palestine, such as Samaria. Above all must be borne in mind the series of funerary monuments in the vicinity of Jerusalem: the Pyramid of Zacharias and the Tomb of Absalom in the valley of the Kidron, described above; the well known but misnamed Tombs of the Kings; the tomb of Herod's own family at Nikephurieh, as well as many other buildings and ruins less known but not less expressive of the architectural and decorative tendency of the age. The magnificent Corinthian peristyle with which Herod adorned the approach to the Senate House in his native city of Ascalon gives a just idea of what must have been the appearance of the colonnades and porticoes that surrounded the temple, and, with even greater certainty, of the monuments outside the temple area devoted to games and contests.

Another monument realised by the munificence and pride of Herod was the fortress on the crest of Bezetha that protected the approach to the Sanctuary from the north-west. Ever since the origins of the temple some form of artificial defence existed in this zone, though gradually pushed southwards by the extension and development of the sacred area. Herod himself finally moved it and surrounded it by a formidable fosse, constructing a monument which was at once fortress and palace. This he named after his Imperial master—a fact that would alone suggest the taste and style in which the work was carried out, even if there were no material indications such as the remarkable remains that may still be seen.

Returning thus from this rapid survey of the area to our starting place in the crypt of the Russian hospice, eastward of the Holy Sepulchre, there remains in conclusion the question of the significance of the several Corinthian columns first mentioned in our summary. The answer is not difficult, for a number of similar features are to be found in and about the small shops of the adjoining bazaar, fronting therefore on a permanent thoroughfare. These betoken the existence, whether in Herod's

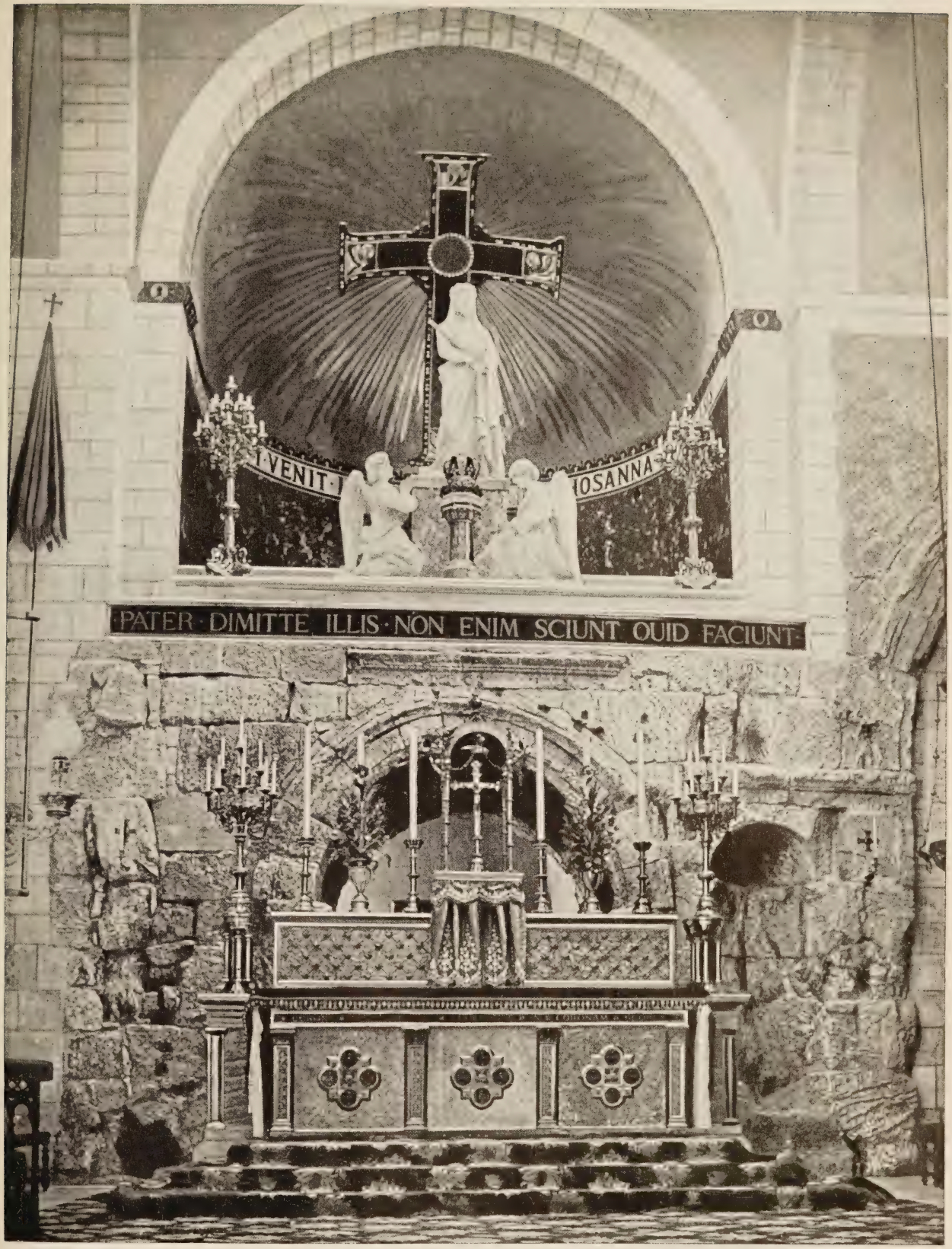


Photo from Prof. Garstang.

ECCE HOMO ARCH IN THE VIA DOLOROSA

One of the "stations" on the Via Dolorosa, or Christ's path to the Cross, is known as the "Ecce Homo Arch"; here it was, according to tradition, that Pilate exclaimed: "Behold the man!" It is, however, extremely doubtful whether the masonry dates from Herodian times; more likely the arch was an entrance in Ælia Capitolina. The central span bridges the street, but the side arch on the north, as shown here, has been used for the choir of the Church of the Sisters of Zion.

Photo from Prof. Garstang.

WHAT AN HERODIAN BASILICA MUST HAVE LOOKED LIKE

Herod Hellenised Jerusalem, but beyond scanty remains in the Russian Hospice there is little wherewith to reconstruct the secular part of the city in his time; and in order to obtain an idea of its appearance one must go to other towns of Palestine Hellenised, or Romanised, at about the same date. In the Church of the Nativity at Bethlehem, for instance, Roman columns and capitals are admirably preserved; indeed the whole building even to-day must look strangely like a Basilica of Herod's period, with its fine vista of unfluted Corinthian columns receding to the background on either side.

Photo by the British School of Archæology at Jerusalem.

COLUMNS LIKE THOSE THAT MUST HAVE ADORNED JERUSALEM

Before the advent of Herod the Great Jerusalem must have looked far more like the modern town than it did after his embellishments—and still more so after its conversion into the Roman colonia of Ælia Capitolina. Colonnades and porticoes were the main features of Herod's improvements, and other towns besides Bethlehem may be enlisted in forming a mental picture of their appearance; this photograph shows the portico of a Roman temple of Herodian date standing in lonely ruin at Jerash.

Photos by the British School of Archæology at Jerusalem.

ROMAN STYLES IN ARCH AND FOUNTAIN AT JERASH

Jerash was the old Gerasa, a town on the farther side of Jordan not far from Ramoth-Gilead. In the upper photograph we see the ruins of its triumphal arch built in Herod's age; those who wish to find a place for the Ecce Homo Arch in the Herodian Jerusalem think that it must have been of this type. Below is a drinking-fountain of the same era at Jerash, showing how the façades of public buildings in the most distant regions were adorned at this time in the Roman manner.

period or in the remodelled plan of the city in the second century, of a "Via Principalis," flanked, as was the Roman custom of those days, by an avenue of columns, and running generally in the line of the present street of shops. Such avenues are distinctive features of the cities of this age at Samaria and Jerash, where rows of columns may be seen to-day still standing in position. The origin of this feature may be traced on Palestinian soil to an earlier Hellenistic age, for excavations at Ascalon have shown that before Herod built his sumptuous forecourt to the Senate House of the city there ran through the same area a causeway flanked by rows of columns connected by a screen wall on either side. This avenue, though less ambitious in conception and smaller in execution, was nevertheless the prototype of the more sumptuous approaches through the Herodian, or as it might be said the "Augustan" city. More generally also it may be inferred from the analogies presented by these other cities that so far as was feasible in the existing state of the city the efforts of Herod were directed to initiating a definite town plan, somewhat like that carried out with deliberation but "ab initio" at Jerash. There the town was laid out on virgin ground, with its central principal street and cross streets at regular intervals, all decorated with colonnades and the junctions with appropriate features; the quarters or areas thus enclosed were allocated to special groups of buildings, the "zones" of the modern town plan. Doubtless this could not be realised by Herod in Jerusalem, a city that had already developed through centuries of Oriental and distinctively non-classical traditions. It was not until after the total destruction of the city by Titus that it became possible to lay out a new city upon a classical plan. This work was carried out by order of the Emperor Hadrian in the second century: but it was not Jerusalem that arose from its ashes, it was no longer the holy city of the Jews, the annexe of their thousand-year-old temple that was reconstructed; but a new Roman city by the name of Ælia Capitolina that was built out of the historic ruins of centuries.

Notwithstanding the complete change which the city underwent, and the consequent interment of nearly all the vestiges of the Herodian city, we have seen that some elements for the reconstruction of the picture of Jerusalem in the time of Christ do

exist, and that a temperate imagination may visualise with confidence the general outline and appearance of the city at this age. Doubtless the facilities which are now offered to research in accordance with the mandate of the League of Nations will soon enable much fresh detail to be added to the picture.

By one standing on the Mount of Olives, in the east, which still, as of old, gives the best point of view, there would be seen in the foreground, where The Dome now stands above the Rock in the sacred enclosure, the Temple at the culmination of its development, the legitimate pride and glory of the Jewish nation, with its imposing circuit of sumptuous colonnades and porticoes, and its courts rising, as it were, in échelon, right up to the inner Sanctuary, where the majestic pylon gleamed with its covering of marble and its gilded surfaces. To the north (dismissing from our mental view all the modern walls and buildings) there arose the powerful mass of Antonia, the fortress that dominated and at the same time protected the sacred area on that side. To the south, the uninterrupted sequence of dwellings and palaces fell gradually away right to the foot of the hill of Ophel, as far as the Pools of Siloam. The main eastern wall followed the same course on the brink of Kidron, turning westward at the extreme points indicated to enclose the city. On the slopes of the western hill (Mount Zion) were grouped and ranged other quarters relatively more recent but not less populous than the old, crowned on the western horizon by the imposing silhouette of Herod's Palace. At no period of its history could the Sanctuary and City have presented a more inspiring aspect. The rhythm and harmony of Græco-Roman art, so beautifully rendered against the Oriental sky, restrained the louder tendencies of Herod himself, while infusing order and taste into the traditional chaos of the city.

Photo by the British School of Archæology at Jerusalem.

ARCHITECTURE OF HEROD'S JERUSALEM REFLECTED IN PROVINCIAL JERASH

Seen silhouetted against the afterglow between sunset and nightfall, the shattered columns that mark the site of old Gerasa give the beholder a fugitive glimpse of what Jerusalem must have looked like to the subjects of Herod and his line; for though the shifting crowds among whom Christ lived His life are made vividly alive by the Gospel story, they move for most of us against a hazy background. Some fragments of Corinthian columns in the crypt of the Russian Hospice prove the existence in Jerusalem of a Via Principalis lined with shops and porticoes, a prominent feature in Roman towns; and this photograph of the Via Principalist at Jerash leading to a colonnaded forum serves almost as a reconstruction of Jerusalem.

Photo by Donald McLeish.

EVIDENCE FROM SAMARIA OF THE CHANGES WROUGHT BY HEROD ON JERUSALEM

The old capital of the northern kingdom of Israel, founded by King Omri, carries in its name an epitome of the history of Palestine and Jerusalem. The word Samaria is a Hellenised form of the Aramaic Shamerayim; but the name of the modern village, Sebastiyeh, is a corruption of Sebaste, which in its turn is Greek for Augusta. Augustus, Emperor of Rome, had given Samaria to Herod the Great who lavishly fortified and adorned it, and renamed it after his Imperial patron; it underwent a transformation similar to that at Jerusalem, but more of the ruins remain to tell the tale. Here is the terrace of the

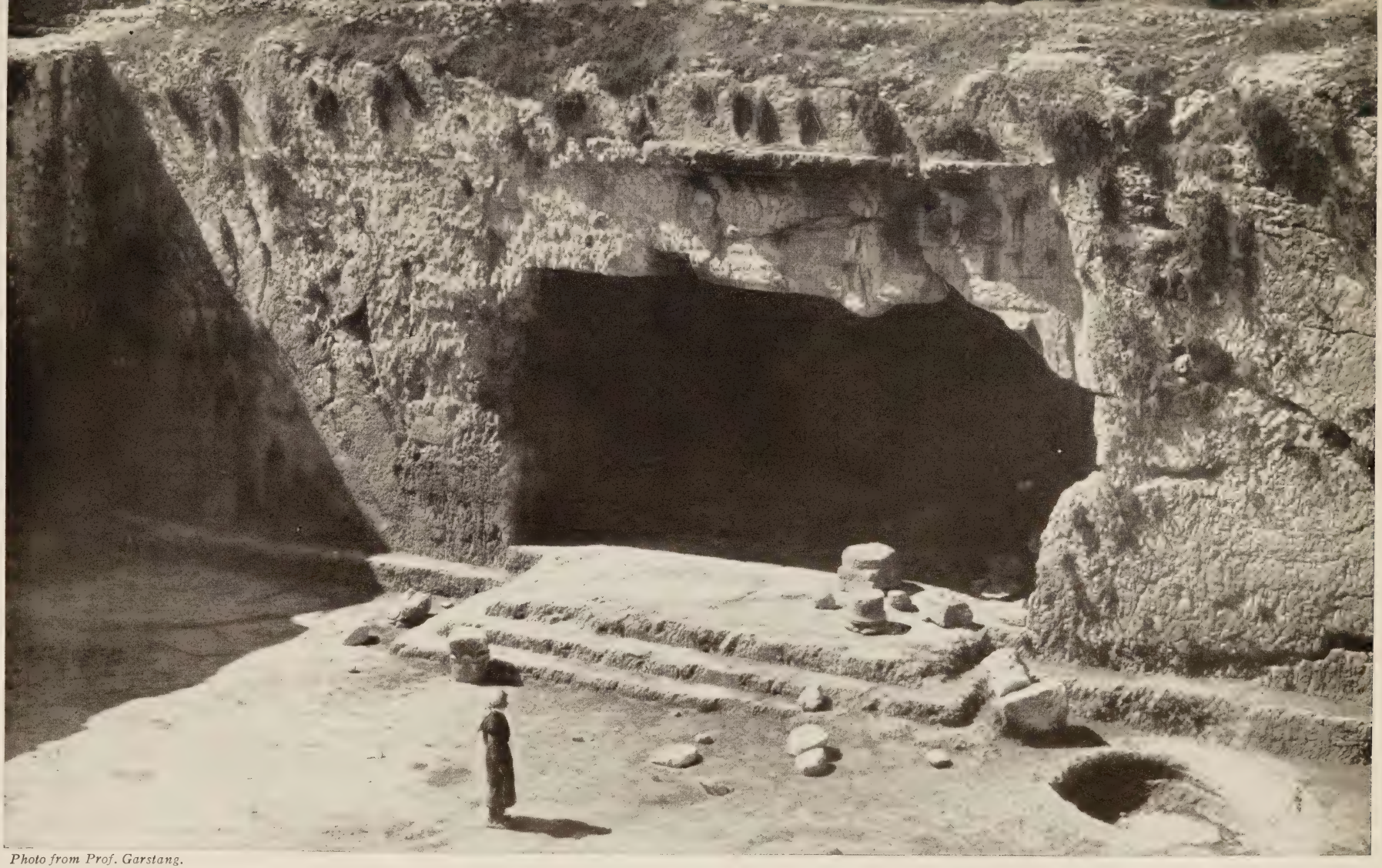


Photo from Prof. Garstang.

ROCKY PORTAL OF THE "TOMBS OF THE KINGS," AN HERODIAN FAMILY SEPULCHRE

Apart from the Haram precincts and enclosure, there are almost more links with the Herodian Jerusalem without the walls than there are within. To the east of the Haram there are the so-called tombs of Absalom, S. James and Zacharias, while to the north of the city are the "Tombs of the Kings" of which the entrance is illustrated above. To reach this entrance, formerly supported by two columns, one has to go down a rock-hewn staircase, pass some beautiful old water cisterns, and cross an open court; beyond the portal is a vestibule with a round cistern in it, and leading from it on the left a sunk passage that could be closed with a rolling stone. Beyond that again are the tombs proper, consisting of seven chambers on different levels. Some authorities connect these sepulchres with Queen Helen of Adiabene, though the pyramid tombs are a more probable identification.

Photo by the British School of Archæology at Jerusalem.

GROTTO OF S. JAMES AND PYRAMID OF ZACHARIAS

A little to the south of the "Tomb of Absalom" are two other funeral monuments; one is hollowed out in the rock, and known as the "Grotto of S. James" from a legend that the Apostle hid himself there after the arrest of Christ, while the other is called the Pyramid of Zacharias. Completely rock-hewn like the first, it yet stands isolated as though built up, and with its plain surface is more Egyptian in appearance than the Tomb of Absalom. All three are Herodian in date.

Photo by F. M. Good.

ARAB TOMBS GUARDING THE GOLDEN GATE

The Golden City has already been mentioned as embodying masonry of Roman workmanship. It owes its name to a Latin mistranslation of "the Gate which is called Beautiful"; but this was almost certainly within the Temple Court, while the Golden Gate is in the eastern wall of the Haram, probably on the site of the Shushan Gate of Herod. It was in 810 that the Arabs closed it up; but there is still a tradition current that some Friday a Christian conqueror will enter by it.

ANCIENT ARTS AND CRAFTS. X

PREHISTORIC ROCK CARVINGS IN THE BRITISH ISLES AND BRITTANY

By E. W. Lynam

PREHISTORIC ROCK CARVINGS IN THE BRITISH ISLES AND BRITTANY

By E. W. Lynam

Assistant in the British Museum

PALÆOLITHIC man was not only a hunter, but a gifted and happy artist, who delighted to draw beasts and scenes of the chase upon his cave walls and on his implements. In the British Isles, unfortunately, an Arctic climate restricted his movements and his increase; there are to be found only three examples of the free and vigorous art characteristic of him, and of these, that discovered at Grime's Graves is ascribed by some authorities to a later age, the Neolithic. In any case, the whole art is more characteristic of Spain and Southern France and has been already described in pages 757 to 765.

Apart from these, the oldest rock carvings in Britain were probably cut by men who lived at the end of the Neolithic and early in the Bronze Age, c. 2100-1500 B.C.; their descendants still form a strong element in the population. Though so comparatively late in time, these carvings have none of the grace and art of the palæolithic engravings. Their interest lies in the light which they throw upon a growing civilisation and in the secrets which they still hold. While palæolithic art may be called individualistic, the art of perfectly free human beings, these later petroglyphs (rock carvings) are the art of a community. They are the work of people bound and disciplined by social and religious organisations.

Such rock carvings, then, probably contain the key to the religious beliefs held by the Bronze Age ancestors of the British peoples, especially to their beliefs concerning death and the life after death. Nearly all of them, in Brittany as well as in Britain,

are found on the huge stones of megalithic dolmens, or burial chambers, in which were interred the great men of the time. The dolmens are, or were, covered by great tumuli or barrows. Only a profound and widespread religious feeling could have moved man, in an age when the use of metal was little known, to construct such laborious monuments as these chambered tumuli, and that feeling is expressed more imaginatively in the dolmen carvings. In truth, the Bronze Age barrows, round which the people held councils, tribal assemblies, and solemn games, must have been to them much what churches were to mediæval Christians.

The majority of the petroglyphs, especially in Scotland and Ireland, consist of a medley of figures placed on the rock without order or apparent connexion; except in a few cases, ornament can hardly have been intended. The dolmen figures are obviously symbols, religious, magical, or totemistic. Some are images of real things, used with a hidden meaning; others, like the solar ship, are symbols already familiar in Southern Europe; most of them show the influence of neolithic art, which employed only geometrical and linear patterns and avoided the representation of living and organic things. If these grave sculptures represent the religious art of the age, then the imagination of the artists seems to have been restrained by "taboos" and traditions more complicated than any ever imposed by Christianity. Under the influence of rectilinear designs even the image of the earth deity suffered degradation into geometrical patterns, as we shall see. And once a character—or a sacred sign—becomes conventionalised there is a tendency to multiply it; the more its old significance is hidden, the more extravagantly is it used. Thus the repetition of a figure several times on a single stone, which is so frequent in these petroglyphs, may have been to give it force, just as a modern man will repeat a brief curse in order to make it effective.

Ireland is particularly rich in rock carvings, possibly as a result of her busy commercial intercourse with other countries in the early Bronze Age (c. 1800-1000 B.C.). They show that in her rock sculptures, as in other things, Ireland was a meeting place of strange elements, a source of surprising combinations. England, on the other hand, possesses only one remarkable ex-

Photo by Z. le Rouzic.

DEGENERATION OF THE "OWL FACE"

From the remains at Locmariaquer comes this flat stone engraving. According to M. Déchelette it is a further evolution of the faces shown on another page; the eyes at the top and foot are circular, and the two middle pairs demi-elliptical.

From "New Grange," by George Coffey.

CLUES TO NEOLITHIC RELIGION

Inset on the left, the "ship of the sun"; above, various signs among which the ship is seen again on the right. The topmost figure of all is probably the "sun horse" bearing the sun.

From R. A. S. Macalister's "Ireland in Pre-Celtic Times."

RUDE RECORD OF A NEOLITHIC FIGHT

Found at Cloonfinlough in Ireland, this engraved fragment is probably one of the oldest examples of neolithic carving in the British Isles—truly a mighty fall from palæolithic grace. The vertical strokes with circles and knobs at the top, and perhaps the plain crosses, may represent men—possibly a battle between tribes.

IDEAL TYPE OF THE "OWL FACE" STATUE

From their resemblance in shape to a Gothic arch, these statues are called "ogival." One of the most life-like carvings of the age is illustrated above; it stands beside the church of Saint Martin Guernsey. Expressing the same motive as the French figure shown below, it typifies a much maturer art.

After Déchelette.

SIGNS EVOLVING FROM THE "OWL FACE"

From the very crude suggestion of the face of some female deity of the Stone Age (Fig. A) arises the inspiration of the more geometric decorations (Figs. B, C, D) of the Bronze Age in Ireland, Scotland, and Brittany. Eyes become first concentric circles, and, later, connected spirals.

Photo by Z. le Rouzic.

INSPIRATION OF BRONZE AGE CARVINGS

A statue of the "owl face" goddess from Saint-Sernin in Aveyron, France. Though found far from Brittany in the north, it is important to remember that this figure in its degenerate expression is thought by M. Déchelette to be the commonest decoration of Breton and British carvings.

ample of Bronze Age sculpture. The numerous petroglyphs of Brittany are in some cases rather older than these; they are important as marking the route by which cultural ideas and symbols travelled from the Iberian peninsula to our islands. One of the most interesting examples, that at the "Table des Marchands," Locmariaquer, has already been dealt with in this work by Mr. Stevens (see illustration facing page 657). The most remarkable carvings are found near the coast of Morbihan, around the Golfe du Morbihan, Locmariaquer, and Carnac. Scotland possesses many stones carved with circles, concentric circles and occasional spirals, but these have no features that give any exceptional interest.

Some of the symbols on British dolmens are found in a rude form even on palæolithic objects. They are such simple designs, however, as man would make instinctively, and probably began in no special time or place. One of them is the "twig" or "fern leaf" figure, which occurs at New Grange and Lough Crew, in County Meath, Ireland. On palæolithic objects from Spain it sometimes represents hair, but its later meaning is unknown. Another is a series of half circles or demi-ellipses arranged concentrically, with an eye or dot in the middle. It is found repeatedly at New Grange, Lough Crew and Gvar'Inis, an islet in the Golfe du Morbihan. It suggests at once the image of the sun on the horizon; yet sun worship had not developed in Western Europe in palæolithic times. It may possibly be a picture of a cave, from the entrance. M. Déchelette's interpretation of this as a Bronze Age symbol is given below. Yet another is the spiral; but its appearance in the north is dealt with later.

Most of the other figures belonging to the late Neolithic and early Bronze Ages were probably introduced into the British Isles either through the spread of cults and ritual practices or through commerce. The former influence, which implies some immigration, seems to have been the more powerful. The symbols or motives drifted up from Southern Europe along two routes, either from the Iberian peninsula through France and Brittany, or from the islands and shores of the Ægean Sea by way of Central Europe and Scandinavia. Comparative archæology has shown that there was a busy intercourse by sea all

round Europe 3,500 years ago, and a free interchange of ideas between peoples separated from each other by thousands of miles of continent and by the greatest differences of race and language.

Carvings on a slab at Cloonfinlough, in King's County, Ireland, are among the oldest in the British Isles, for they closely resemble early neolithic sculptures in Spain. The vertical strokes with circles, and sometimes a knob, at the top represent men. The cross-shaped signs on the upper half of the stone are probably also men; and Prof. Macalister suggests that the whole may represent a battle between two tribes. Depressions like footprints which occur here are found also, but much larger, on rocks in Brittany, Sweden and Egypt. They usually appear in pairs, and are believed to have had a religious association.

A large group of the rock figures is connected with sun worship. The most common and probably the oldest of these is the circle with its elaborations—the circle surrounding a cup or pit, and the concentric circle. This symbol is found on monuments to the dead all over Europe and North Africa. Sun worship seems to have reached North-Western Europe in neolithic times and flourished from that time far on into the Bronze Age.

The concentric circles with a channel leading out from the centre have been variously explained. Some archæologists believe that they are drawings of the ring-forts subject to the chief buried in the tomb on which they are carved. The channel would represent a gangway or entrance through the fort walls. It is also suggested that groups of concentric circles are rude maps of the territory and strongholds of the dead chief. When the channels from them join together, it would indicate that these forts were all of one mind or tribe, subject to one ruler. Another theorist holds that groups of circles are astronomical charts.

The ship of the sun, a graceful symbol in Egypt, South Eastern Europe, and Scandinavia, appears at Mané Lud in Brittany and at New Grange and Dowth in Ireland abbreviated into something like a rude comb. The teeth of the comb represent the little rowers. The solar ship originated among early maritime peoples, who believed that during the night the sun was borne on a ship across a wide sea which lay between its setting

and its rising points. In most cases a round sun is drawn above the boat. One carving at Lough Crew may represent a ship, with an eely fish—a version of the dolphin of Southern Europe—on the prow. It is difficult not to believe that the carving on the right of the illustration, "Clues to Neolithic Religion," facing page 904, was not meant to be a boat with oars.

The solar horse was a blood animal which appears prancing on the ornament of many metal and pottery objects of Italy, Central Europe, and Scandinavia. What may be a drawing of him, very much humbled but still bearing the sun on his back, appears at Lough Crew. The myth of the solar horse persisted in one form into classical mythology. Crosses within circles, rayed circles and "flowers," of which numbers are carved at Lough Crew, probably all represent the sun. The swastika, a well-known solar symbol, appears on a rock at Ilkley, Yorkshire, elaborated in a style most probably derived from Scandinavia. The image of the sun giving out light and energy is reproduced in objects of bronze, evidently worn as amulets. There is evidence that the image of a snake was associated with sun worship during the neolithic period. Carvings on the dolmen in the island tumulus of Gavr'Inis are sometimes believed to represent snakes, though they may merely be zigzags, like those on Irish monuments. The figures at Gavr'Inis are very different from anything else in Brittany.

The appearance of the spiral motive, carved elaborately and profusely, on stones at New Grange is very curious and illustrates the dependence of art upon trade. While the spiral covers the great stone before the entrance of New Grange and is repeated on many stones in the north of Ireland, it occurs only once in Brittany, whither it was imported from Ireland, and only in the northern part of England. It is now agreed that this design came to Ireland from Hissarlik (the pre-Homeric city of Troy) and the islands and kingdoms of the Ægean, where it was a popular form of ornament from c. 2400 to 1400 B.C. It was introduced thence into Scandinavia by the traffickers who travelled overland from the head of the Adriatic to the Baltic Sea to get the precious amber of the north—the route is now known as "the amber route." From Scandinavia the spiral reached Scotland, where it appears on rocks, as well as on sev-

eral curious stone balls. It came to Ireland in the Bronze Age, and flourished there. Some antiquaries have inferred from this that the great tumuli of Brugh na Boinne, which include New Grange and Dowth, mark a settlement of conquering invaders from Scandinavia. However that may be, the spiral which was only an ornamental motive at Crete and Mycenæ seems to have acquired a religious significance in the British Isles.

The "owl face" figure is one of the most important among British petroglyphs. It is the only representation we have of a deity in person; and it is also, according to M. Déchelette, the origin of a diversity of rock signs in Brittany and Ireland. This is the face of a female deity, and though it is hardly the sort of face that launches a thousand ships, its history goes back to pre-Homeric Troy. Her image is found all over Southern Europe, from Hissarlik to Portugal, at the end of the neolithic period. It is usually a small piece of stone, slate, wood or pottery, rudely shaped, without limbs, but bearing eyes, hair, tattooed cheeks and a neck ornament carved or painted upon it. Her figure early took the shape of a flat cone. In this form provided only with the upper half of a face but ornamented with an axe or a bent staff, it appears on menhirs and on the stones of artificial caves in the Marne and Gard valleys in France.

According to M. Déchelette, when this image was introduced into Armorica at the beginning of the Bronze Age, it suffered the geometrical degradation already mentioned. The half-face became merely two circles, or dots in circles ("eyes"), with a double wave or "yoke" above them for eyebrows or hair. After this simplification, most of the elements were ignorantly multiplied. A second and third pair of eyes appeared lower down, and these were sometimes turned into demi-ellipses. This produces a figure occurring frequently in Brittany, and hitherto called a "shield" or an "octopus"; on similar idol faces in New Guinea the demi-ellipses low down on the cheeks represent ear-rings. In other developments the yoke became a zigzag above circles, the lines on either cheek, originally standing for tattoo marks, became zigzags, and these zigzags were soon elaborated into chevrons, lozenges and triangles. The rows of triangles at New Grange are almost a reproduction of a pattern found engraved on slate idol plaquettes in Portugal. The tri-

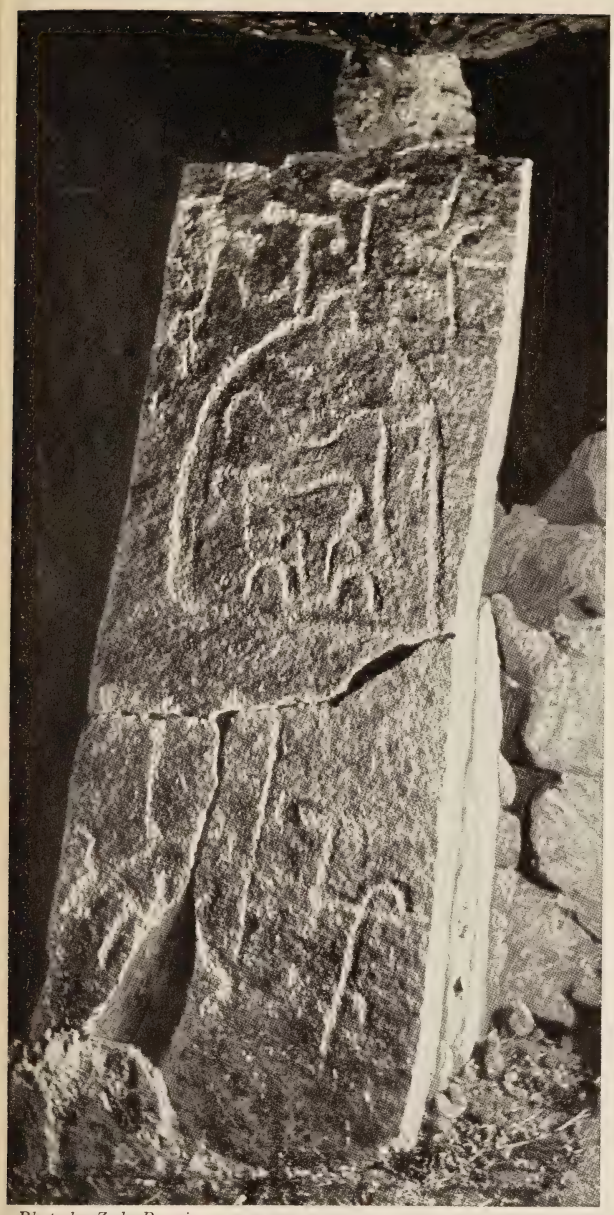


Photo by Z. le Rouzic.

AGRICULTURAL SIGNS FROM BRITTANY

As an example of the "axe-plough" motif, according to M. Déchelette, this carved stone from the Mané er H'roek tumulus could not be bettered. He also sees an ox in the lower left-hand sign—indeed, horns and muzzle may well be distinguished.

Reproduced from the "Antiquaries' Journal."

INSTANCE OF BRITISH PALÆOLITHIC ART

A comparison of this carving on flint crust, of an elk disturbed while browsing, with the palæolithic art on another page, will show that they belong to the same art phase. It comes from Grime's Graves in Norfolk; two other British examples are known.

By permission of the Trustees of the British Museum.

IDOL, OR PLAYTHING OF A CHILD?

The Folkton drums, so called from the place of their discovery in Yorkshire, are anomalous. Little chalk cylinders from the grave of a child, they present a bewildering diversity of signs, such as the "owl face" which as we have seen is Breton, and the "butterfly" figure which is Ægean—both exemplified above.

From "New Grange," by George Coffey.

SPIRAL-COVERED SLAB AT NEW GRANGE

Just west of Drogheda in Ireland is a remarkable group of burial mounds identified with the Brugh na Boinne of Irish legend. Consisting of stone chambers covered with earth, they abound in rock carvings prominent among which is the spiral, as this photograph of the entrance to the largest of them, at New Grange, will show. In this, as in some of the following photographs, the markings have been slightly emphasised, but never so as to impair their value.

From "New Grange," by George Coffey.

A MEDLEY OF CARVINGS AT KNOCKMANY

A further instance of Irish rock carving, at Knockmany in Tyrone. Several distinct signs are exemplified—the wavy and angular zigzag, the concentric circles, triangular markings, the cup-shaped hollow, and others of a less definite type. The "face" in the centre is probably accidental.

angle upon the latter is held to have been a symbol of the female principle of deity.

Introduced from Brittany into Ireland, these elements, their pictorial origin now forgotten, met a new pattern, the spiral, just introduced from Scandinavia. In Ireland, therefore, conjoined spirals are sometimes substituted for the "eye" circles. The Gavr'Inis petroglyphs, M. Déchelette believes, are later than the other Armorican carvings and show definite Irish influence. There, as in Ireland, the numerous demi-ellipses arranged round a central figure are multiplications of the "eye" demi-ellipses. There, too, appears the only spiral in North-Western Europe outside the British Isles. M. Déchelette admits that his theory of "cherchez la femme" cannot cover all our carvings of circles, cups and circles, and demi-ellipses, but thinks that old figures may have been adapted to a new purpose.

The woman idol or her cult may have reached the north in yet another disguise. The shape of a rude cone, in which she appears in the Gard valley, may have originated the conical or "ogival" sign on the Mané er H'roëk stone at Locmariaquer. This shape is noticeable in many Morbihan antiquities, for example, in numerous little stone amulets, and in the Table des Marchands support-stone. If this be her image, she has indeed come at last to "sans teeth, sans eyes, sans taste, sans everything."

The mysterious female image is conjectured to have represented an earth deity. Mother Earth and the sun would be natural objects of worship to an agricultural people. Her appearance on burial monuments would support this theory, for there has always been a close association in the primitive mind between the idea of death and burial and that of sowing grain. In prehistoric times the ceremony of sowing was commonly accompanied by human sacrifice. Thus this deity may be even more evil than she looks. M. le Rouzic, indeed, has put forward a theory of sun and earth worship for Brittany. In the signs on the Mané er H'roëk stone he sees agricultural emblems; the axes are "axe-ploughs" and the limp animal at the bottom is an ox, the wavy lines being abbreviated horns of oxen.

M. Déchelette would explain the axes, both handled axes and plain celts, which appear in many petroglyphs in Brittany,

and on a rock at Kilmartin, Argyllshire, by the undeniable early association of an axe with the woman idol. Hand axes were doubtless sometimes used to break the ground; and it has been suggested that these representations may be ritual implements employed at the ceremony of sowing, first to carry out a human sacrifice and then to break virgin soil. Certainly polished celts made of jadeite, callaïs and other rare stone seem to have been used as votive or ceremonial objects in Morbihan far into the Bronze Age. The handled axes on the Mané er H'roëk stone appear also to have been ceremonial rather than useful weapons, like Lord Mayors' maces.

The "crooked staff" or "wand of authority" sign which occurs on the Gard menhirs and at the Table des Marchands may be regarded with great probability as the picture of a hoe or pick for tilling. If M. Déchelette's theories about the "owl face" figure are correct, the design on the Folkton drums cannot have reached England through Brittany. These little chalk objects, found in the grave of a child at Folkton Moor, Yorkshire, are unique. Their engravings, not only the "owl face" but the "butterfly" motive (which is found on gold roundels at Mycenæ) and the returning spirals, are all in the style of ornament prevalent in the neighbourhood of the Ægean, c. 1500 B.C. Others, such as a saltire within an oblong, occur at New Grange. It is difficult to understand how these drums got to Folkton; possibly they were brought home from the Continent by British sea-rovers. They appear to have been regarded as idols, like the earlier southern images of the female deity. They are now in the Pre-historic Room (Case F) of the British Museum.

Apart from their fascination, these rock carvings of the British Isles and Brittany are valuable because they throw light on the movement of prehistoric cults and religious ideas associated with death and burial, on the early history of ornament, and on European commerce in the Bronze Age. On the other hand, in spite of clever theories, such grave sculptures are still to a great extent a puzzle to us. We understand neither them nor their purpose. It may be that we never shall, for our habit of logical thinking removes us even further than time from the minds that laboured so strangely and so devotedly 3,500 years ago.

TEMPLES OF THE GODS. XVII

ANCIENT JAIN SHRINES AND THE COLOSSUS OF MYSORE

By F. Deaville Walker

ANCIENT JAIN SHRINES AND THE COLOSSUS OF MYSORE

By F. Deaville Walker

Author of "India and her Peoples," etc.

THIRTY-TWO miles from Hassan, in the centre of the Mysore State, is one of the marvels of ancient India, a gigantic human figure hewn out of the solid rock. Standing upon the summit of an isolated hill, with its outline silhouetted against the sky, it can be seen for at least fifteen miles around. For nearly a thousand years this great image has looked down upon the fertile plain beneath. The hill upon which it stands is one of two that guard the pretty village of Sravana Belgola. The loftier of them, Vindhyagiri, is a great dome of smooth granite upon which no blade of grass can grow. Its summit, some 470 feet above the plain, is strewn with mighty boulders and masses of broken rock, one of which, apparently, was utilised by the old-time sculptors and fashioned into the huge figure shown in the accompanying photographs. A large cloistered court was afterwards built around its feet, and this in turn was surrounded with the halls and courts of a temple.

Few tourists ever reach this remote sanctuary, yet there are not many places in South India that better repay a visit. We approached by motor and for many miles saw the great image rising above the plain before us. Owing to motor trouble it was nearly midday when we reached Sravana Belgola. There was little shade in the streets and around the beautiful sacred tank, and none at all on the great bare rock that towers above. The ascent is made by nearly 700 steps hewn in the granite, and

as the hill is sacred a priestly custodian politely requested us to take off our shoes and climb without them; we meekly submitted, although the sun beat fiercely upon that mass of granite and the steps were uncomfortably hot to our unprotected feet. Patiently and breathlessly we toiled upwards, yet when we paused for breath the heat of the granite was so painful to our feet that we were compelled to move on again. The steps led through two decorative stone arches and past two or three small shrines, and as we ascended we had a beautiful view of the village below with its temples, its sacred tank, and its graceful palms. At last we reached the portico of the temple that crowns the summit of the hill, and were glad to pause in the welcome shade. Soon after we entered the open court that surrounds the colossus of Mysore.

The huge image rose majestically before us, in an almost perfect state of preservation despite its antiquity. Its height is over 60 feet; the breadth across the shoulders is 26 feet; the toes are 2 feet 9 inches long, and the middle fingers 5 feet 3 inches. The figure is nude, and stands erect, facing northward towards some particularly sacred shrines on the second hill. The mighty feet rest upon a low pedestal carved to represent an open lotus flower. In order to support the enormous weight of the body, the rock has been left around and behind the legs, and carved in the shape of large ant-hills. A climbing plant, cut in the stone, twines its tendrils and leaves and berries around the huge limbs, and cobras are seen issuing from the ant-hills. Though the lower parts of the legs are short and the shoulders broad in proportion to the body, the figure is remarkably well cut, and the more so when we consider the difficulties those ancient sculptors must have encountered. Owing to its great height, and the absence of any high place from which to get a satisfactory view, it is difficult to see the image in true perspective; especially is this true of the face, which is quite the best part of the statue. The features are regular, the hair is done in spiral ringlets, and the lobes of the ears are very long. Around the pedestal and on the stone ant-hills on either side are inscriptions in several languages, proclaiming that "Chamunda Raya caused the image to be made." This man was minister to the Ganga king, Rajamalla II., who reigned from A.D. 974 to 984, and it

seems certain that the figure was hewn about the year A.D. 983—the time when the Saxon king, Ethelred the Unready, was attempting to bribe the Danes with gold. The cloisters round it were built about A.D. 1116.

There can be no question as to how the colossus was made. As it is cut from a single block of granite, it is manifestly impossible that it could have been hauled up such a smooth, steep hill as Vindhya-giri and raised to an upright position. It seems practically certain that a projecting mass of rock on the very summit of the hill was carved into the figure as we now see it—a task from which the Indian mind would not shrink. Dr. Ferguson, the distinguished archæologist, says: "Nothing grander or more imposing exists out of Egypt, and even there no known statue surpasses it in height, though it must be confessed they do excel it in the perfection of the art they exhibit."

The image represents Gomatesvara, a Jain saint peculiar to South India. The Jains, a religious order that originated about the same time as Buddhism, or perhaps earlier, are divided into two sects—the Swetambaras, or "white clothed," and the Digambaras or "sky clothed" (i.e., those who regard nudity as a sign of holiness—a practice now forbidden by law). The Jains of South India are chiefly of the latter class, and this great image at Sravana Belgola belongs to them. It is usual for figures of the Digambara Jains to be nude—a feature which clearly distinguishes them from the images of their Buddhist rivals, for images of Buddha, while similar in form, are fully clothed and those of the Swetambaras partly clothed.

This ancient monument, in the stillness of its hilltop shrine, is a most impressive sight, and we stood before it with feelings of wonder and awe; Gomatesvara seemed to be almost a living thing, yet unconscious of our presence. The sculptor's conception was that of a holy man wrapt in contemplation so profound as to be unconscious of the serpents about his feet or the plants winding their tendrils around his mighty arms—oblivious to everything. We seemed to be in the presence of a giant of bygone ages—a giant asleep. Instinctively we trod softly and spoke in undertones lest we should awaken him, for we remembered that he had stood thus for well nigh a thousand years. Ages have rolled over him; ancient civilisations have swept

around his feet; contending armies, Hindu and Moslem, French and British, have devastated the plains below. More than a century ago Arthur Wellesley, afterwards the great Duke of Wellington, turned aside from his conquests to gaze at this mysterious, silent figure. Yet Gomatesvara has remained on his lofty watch-tower, oblivious of it all. As we stood before the unconscious giant a young Jain priest offered a sacrifice of fruit and coconuts on a brass tray before its feet, laying the gifts upon a small stone altar on which a tiny votive lamp was burning. The tell-tale plate of our camera caught him in the act. How diminutive that white-clad priest seemed as he stood before the enormous feet of the image. We walked around the court with its images of the twenty-four Jain saints; we visited the numerous side shrines, and climbed to the flat roof of the cloisters to get a better view and another photograph of the great central figure. Then we stole quietly away and left Gomatesvara to his meditations.

An ancient legend tells the following story concerning the colossus: when Chamunda Raya had finally completed the image he resolved to perform the "Panchamrita Snana" ceremony—i.e., the washing of the image with five liquids: milk, curds, butter, honey and sugar. Vast quantities of these things were prepared in many hundreds of pots. But, to the intense annoyance of Chamunda Raya, when the liquids were poured from a great scaffolding upon the head of the image, they would not flow down below the waist of Gomatesvara, and the intention of washing the image from head to foot was frustrated. Then a celestial nymph appeared, disguised as an old woman, holding the five liquids in a small silver pot, and declared that she would accomplish what the great prince had failed to do. Chamunda Raya laughed, but permitted her to make the attempt; whereupon she poured out the contents of the silver vessel and the sacred fluid at once flowed down and completely washed the image.

Two things resulted: from that time the place has been called Belgola (from "Belliya gola," a small silver pot); and periodically the great image has been washed by its Jain guardians and the pilgrims who gather for the ceremony. The last ceremonies were held in 1887 and 1910.

Photo by F. Deaville Walker.

THE SACRED HILL UPON WHICH THE COLOSSUS STANDS

Gomatesvara stands on the summit of a sacred hill called Vindhya-giri. It is a huge dome of granite upon which not a blade of grass grows; the figure was doubtless cut from one of the many crags that project from the hilltop—its head and shoulders are just visible. At the foot of the hill is the pretty village of Sravana Belgola, with its fine sacred tank. The path up the hillside, passing under two stone arches visible in the photograph, is a series of nearly 700 rock-hewn steps.

Photo by the Rev. H. Spencer.

ENTRANCE TO THE TEMPLE THAT SURROUNDS THE COLOSSUS

In the fierce heat of India the climb up the sun-scorched hill is apt to be very trying, and the hot granite steps burn the shoeless feet—for the hill being sacred visitors are obliged to leave their shoes at the bottom. When the summit is reached the tired traveller is glad to rest in the grateful shade of this temple porch. The temple was built around the image about A.D. 1116. The white and red stripes on the pillars are the sign of a sacred place.

Photo by the Rev. H. Spencer.

HEAD OF THE COLOSSUS RISING ABOVE THE TEMPLE COURT

Taken in the outer court of the temple, this photograph shows the head of the image rising high above the cloisters; standing as it does on the hilltop, it is visible for more than fifteen miles around. An inscription proclaims that it was made by order of Chamunda Raya, who was prime minister to the Ganga king, Rajamalla II. The date of erection was about A.D. 983.

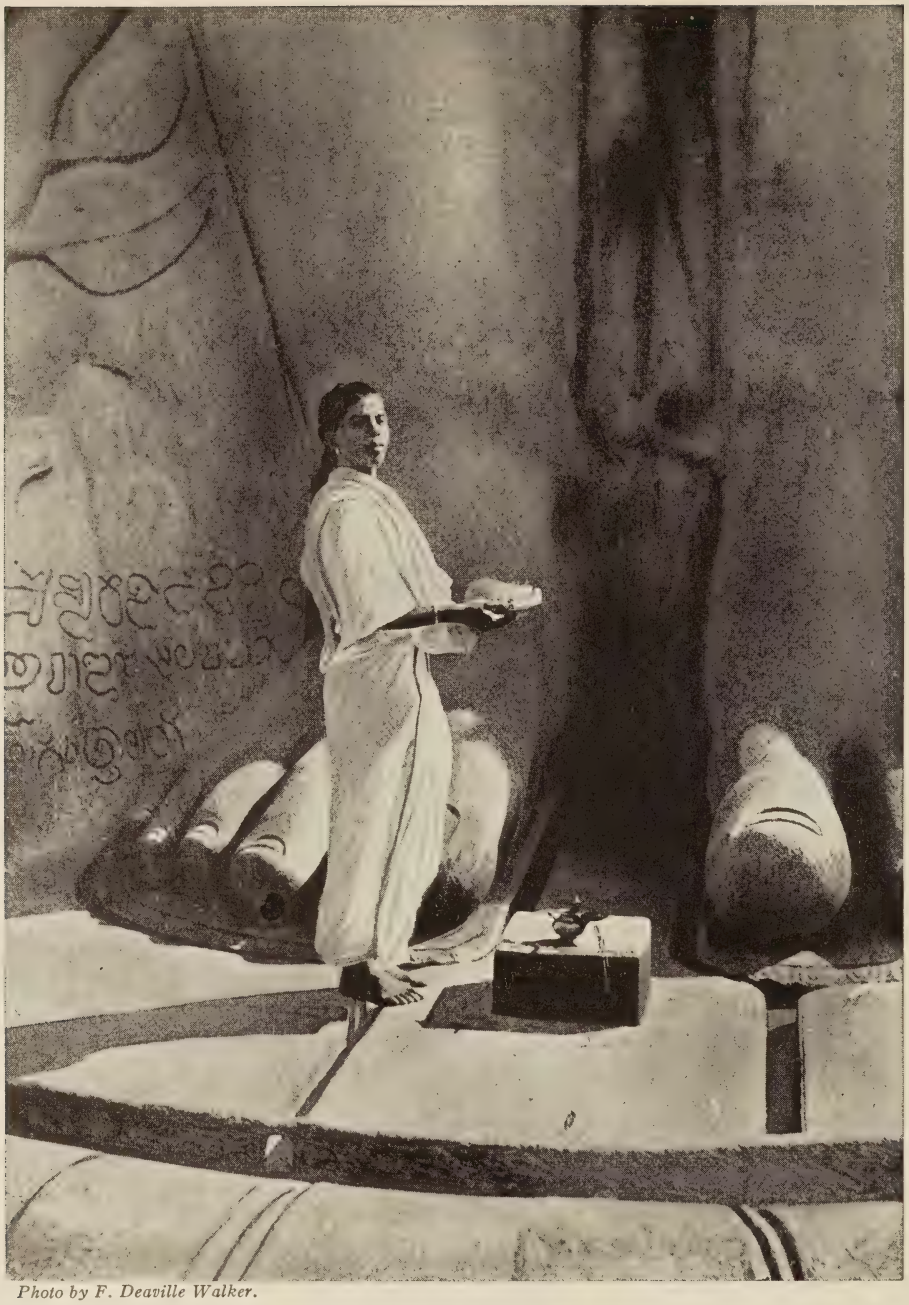


Photo by F. Deaville Walker.

AT THE FEET OF GOMATESVARA

The author was permitted to photograph this young Jain priest in the act of presenting an offering before the huge idol—a small tray of fruit and coconuts. A brass lamp burns on the tiny square altar, and in the background are seen the enormous feet and legs of the image. In the foreground is part of the great rock-hewn lotus flower upon which the figure stands.

Great were the preparations made on these occasions. In 1887 the Kolhapur Swami spent 30,000 rupees on the ceremony. A huge scaffolding was built behind and around the image, leaving the front free. Multitudes of Jains assembled from all parts of South India and even from the north, journeying hundreds of miles to be present. There were Bengalis and Gujaratis as well as Kanarese and Tamils, and so great was the eagerness that some of the pilgrims arrived at Sravana Belgola a month before the appointed time. For several weeks there was daily worship in all the temples of the village and before the feet of the image itself; and when all had gathered there must have been at least 25,000 people. On the morning of the great day, even before dawn, the pilgrims began to ascend the steep steps of the rock in order to get good places for the ceremony. By ten o'clock all the available space in the courtyard and cloisters, and on the roofs of surrounding temple buildings, was crowded to excess. Among the worshippers were large numbers of women and girls in very bright costumes, carrying brass or clay pots. Bright yellow "paddy" (rice) was strewn before the idol, and upon it were laid a thousand gaily painted earthenware vessels filled with sacred water, covered with coconuts and decorated with many leaves. On the top of the scaffolding stood several Jain priests with pots of ghee, milk and such things, and at a signal from the master of ceremonies the contents of these pots were poured simultaneously over the head of the image. This was only a preliminary washing. The grand bath took place at two o'clock. At that hour, amid the great noise of many strange instruments, the thousand pots already mentioned were lifted from before the image and passed from hand to hand up the scaffolding; then, while some priests chanted texts from the sacred books, others poured the contents of the vessels over the head of the ancient colossus. In this anointing fifteen different ingredients were used, viz.:

Water.	Sugar.	Curds.
Coconut meal.	Almonds.	Sandal.
Plantains.	Dates.	Gold flowers.
Jaggory.	Coffee seeds.	Silver flowers.
Ghee.	Milk.	Silver coin.

The silver coins amounted to five hundred rupees. All the while the worshippers, their faces turned to the image, were crying: "Jai, Jai, Maharaja!" (Victory, Victory, Great King). Sometimes the right to pour a pot of the sacred mixture over Gomatesvara is auctioned to the highest bidder and brings in a very large sum of money towards the expenses of the festival. It was during this 1887 washing that the great idol was measured, the scaffolding making it possible.

The 1910 washing was marked by a new and characteristically modern feature. The presence of so many Jains at Sravana Belgola was made an opportunity for a conference at which religious, social and educational matters were discussed, and a number of reform measures were under consideration. Among other things it was resolved to organise boarding-schools for Jain children. The conference also gave a good deal of time to considering how best to preserve the sacred colossus. One suggestion was that it should be protected from the weather by a sort of huge glass case; but this proposal was rejected, not, be it noted, for the mundane reason of impracticability, but because such a scheme would imply a claim to greater wisdom than was possessed by the revered ancestors who made the image. "If they had considered it necessary, they would have erected such a glass canopy, or at any rate would have left funds for its erection. Who are we that we should know better than they?" On the whole the conference favoured more frequent washing ceremonies under the belief that they have done much to preserve the venerable image.

This colossal image is not the only one of its kind, but it is by far the largest and the oldest. There are two complete smaller rock-hewn figures of Gomatesvara in South India; one is at Karkala and the other at Yenur, both in the South Kanara district; and there are also several unfinished ones. The image at Karkala is about 41 feet high and dates from A.D. 1431, while that at Yenur is 37 feet high and was erected in A.D. 1603.

Quitting the presence of the colossus, let us descend the rock steps of Vindhya-giri. In doing so, we get wonderful views of the sister hill, Chandra-giri, that rises precipitously on the other side of Sravana Belgola village (see illustration facing page 923). It is somewhat lower than Vindhya-giri, but

even more sacred and literally strewn with ancient temples and numerous rock-hewn inscriptions. Again the ascent is by a long series of steps, and again our shoes have to be left at the bottom, although the points of archæological interest are sufficient to occupy us for many hours, or even days, if we are to examine them thoroughly.

The sanctity of this hill dates from the third century B.C., and happily much of its story has been revealed to us by the inscriptions, no less than 145 of which have with immense labour and great skill been patiently copied and translated by Mr. B. Lewis Rice, C.I.E., M.R.A.S., Director of Archæological Researches to the Government of Mysore. Several years were required for the completion of this task.

The story is a strange one. Somewhere about the year 290 B.C. a famous Jain teacher, Bhadrabahu by name, led a big migration of Jains from North India towards the South to escape from a period of twelve years' famine which he himself had predicted. One of his disciples was named Chandra Gupta, and it seems practically certain that this was none other than the famous Maurya Emperor (the Sandrokottos of the Greek historians) who reigned over vast areas of North India from 315 to 291 B.C. and was the grandfather of the great Emperor Asoka. Jain tradition declares that on the night of a full moon Chandra Gupta had sixteen dreams which were interpreted for him by Bhadrabahu. The prediction of a famine in which numbers would die of starvation still further impressed the Emperor. He resigned his throne, took the vows of asceticism, and accompanied Bhadrabahu and his 12,000 pilgrims in their southward migration. On reaching what is now Mysore State, they drew near to the twin hills that overshadow Sravana Belgola. Here it was revealed to the teacher that he was about to die; so sending his followers onward and keeping with him one attendant only, Chandra Gupta, he climbed the smaller hill and died in a cave among its rocks. The erstwhile emperor remained, and for at least a dozen years practised austerities upon the hill where his master had expired. We read of him spending his time worshipping his master's footprints; his hair grew to a thick mass, and he sustained life by eating roots and berries. There, in his solitariness, he died.

From that time the hill acquired a very special sanctity. It was called after the imperial ascetic, Chandra-giri. The cave where Bhadrabahu died was revered, and is still shown; but the spot where Chandra Gupta breathed his last became even more sacred. A small "basti" (Jain temple) was built to mark the place, and this still exists (see illustration facing page 925). It is very small, the internal measurements being only 19 feet by 15 feet, and it is difficult to decide its date. Although it has been somewhat altered, it is undoubtedly very ancient. A remarkable stone screen was afterwards built in front of it (see illustration facing page 924), giving, in ninety small panels of bas-relief, the story of Bhadrabahu and Chandra Gupta. This screen also is ancient, but it appears to have been subsequently rebuilt. Then a later temple and a pillared portico were built in front of it, and the whole shrine was partly hidden.

Meanwhile, strange tragedies were taking place on that hilltop, and were recorded for us by numerous inscriptions arrayed all round the little shrine of Chandra Gupta. With few exceptions they are in what are called Old Kanarese characters and are engraved either on the rough faces of rock, where they have been exposed to the weather of centuries, or else on prepared slabs or pillars, and covered by "mantapas" (i.e., small stone pavilions) to protect them. These inscriptions are very numerous, and date from the remote times of Chandra Gupta (the earliest authenticated date in Indian history) to as late as 1830. They deal with the exploits of old kings, the building or enlargement of the temples around, and with the deeds of Jain ascetics who dwelt and died upon this hill far from the ordinary ways of mankind. Not a few relate the startling fact that here, around the shrine of Chandra Gupta, men and women deliberately starved themselves to death as an act of merit. As Jains, they were forbidden to take life; so to get over that difficulty there arose the idea of suicide by slow starvation as an act of religious devotion. It is terrible to think that centuries ago men and women lay on these rocks waiting for death to release them from the existence they despised and from which they sought to escape. In some cases the length of time they held out is mentioned in the inscription. Here are two or three of these tragic records:

No. 2.—Nagamati-Ganti (female), disciple of the excellent Silent Guru (teacher), having kept the vow three months, expired.

No. 5.—Be it well. The fortunate (lady) Jambu Naygi, having kept the vow a month, expired.

No. 13.—The guru of Talekadu, with a great mass of matted hair . . . having kept the vow of a Sannyasi twenty days, expired.

Another inscription—a very long one—tells of the mother of a dead queen journeying to this hill to perform the grim sacrifice, and several verses are devoted to glorifying her act:—

No. 53.—"The queen has attained to godhead; it has fallen to me to remain." Thus saying, she came, and in Belgola by severe penance this mature Machikabbe herself quitted (her body). With eyes half closed, repeating the five words . . . fasting for one month, Machikabbe herself attained godhead by means of her penance in the presence of all the blessed.

An old Jain book gives the following regulations for this strange practice of "sallekhama" (religious suicide): "He should by degrees diminish his food and take only rice seasoned with milk. Then, giving up the milk, he should gradually reduce himself to only a handful of water. Then abandoning even the handful of liquid, he should, according to his strength, remain entirely fasting; and thus, with his mind intent upon the five kinds of reverence, should by every effort quit the body." Mr. Rice, who spent years in translating and studying these strange inscriptions at Sravana Belgola, writes: "They are painfully plain as to the main object for which they were recorded. The bitterest satirist of human delusions could hardly depict a scene of sterner irony than the summit of this bare rock, dotted over with emaciated devotees . . . awaiting the hour of self-imposed death."

To-day a number of interesting Jain temples are grouped around the old Chandra Gupta Basti on the hilltop. There are fifteen of them. They are small but striking, and repay careful study. Most of them consist of a main shrine with a pillared hall before it and an entrance portico, usually with a flight of steps. The shrine is surmounted by a richly decorated terraced

structure culminating in a small dome. The largest of these temples is barely 90 feet long, 36 feet wide and 50 feet high. The exteriors are all more or less ornate, their blank walls being decorated with pilasters, above which are several rows or cornices of carved stone ornament with Jain symbols and mythological representations. The interiors are very dark, most if not all of the light being admitted by the doorways. There are numerous Jain images in and around the temples, and also a small stone figure of Gomatesvara 10 feet high, but it is only carved from the head down to the thighs. The most beautiful object of all is a splendid "stambha," or pillar, which towers above all the temples. It is of exceedingly graceful design, a fine column, with several steps around its base, and surmounted with a graceful open lantern used no doubt for giving light to guide the devout to certain religious ceremonies. It appears to have been built about A.D. 973. Although the whole group of temples is enclosed by a wall, there is an open desolation about the entire place. When the writer visited them in 1920 they appeared to be deserted, and he wandered about freely; there were no priests, custodians or worshippers, and no offerings lay before the images or about the shrines. But the desertion and neglect are not permanent, for from time to time the temples on Chandra-Giri are used for worship; pilgrims come from afar, and at the time of the great gatherings at the ceremonial washing of the colossus that crowns the opposite hill these old shrines are again crowded with the faithful.

We have dealt fully with Sravana Belgola because its sanctuaries exhibit several very characteristic features of ancient Jain architecture. For example, hilltops have a special attraction for the followers of this faith; their most sacred places are usually marked by a number of small temples rather than by one large one; pillars were very much in evidence (as also with the Buddhists and Hindus); and whenever possible the Jains cut from the rocks great figures of their founders and saints. These characteristics mark Jain worship in other parts of India, especially in the north where the Jains have always been most numerous.

The early Jain ascetics made use of caves—again like the early Hindus and Buddhists. The cave (already referred to)

Photo by the Rev. H. Spencer.

PREPARING TO WASH THE MIGHTY IMAGE

At intervals of a number of years the colossus is, with great ceremony, washed from head to foot with a mixture of ghee (clarified butter), milk, curds, sugar and other things. For this purpose a huge scaffolding is erected around the image to enable the priests and worshippers to pour the sacred fluid over the head.

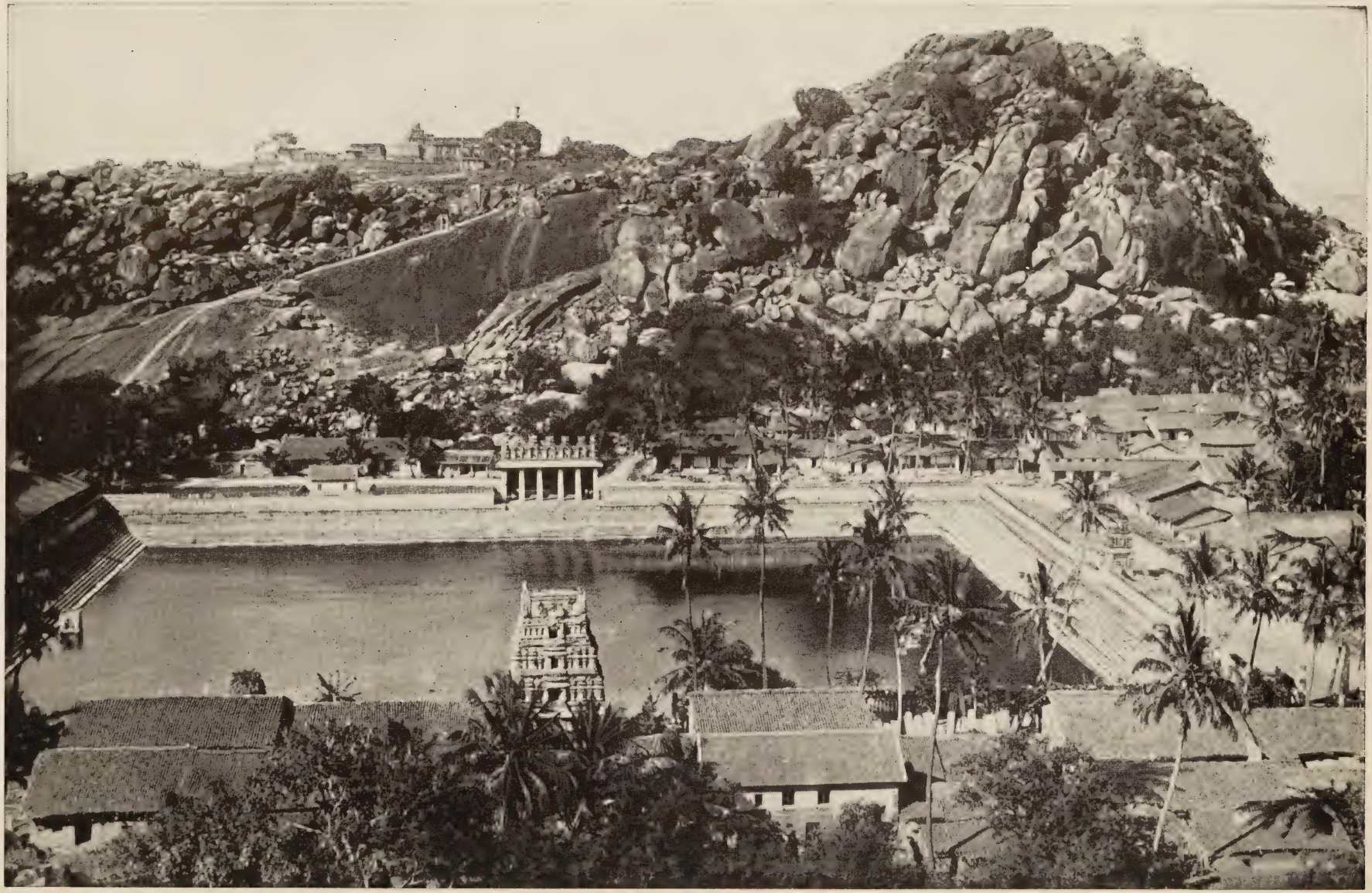


Photo by F. Deaville Walker.

SACRED HILL UPON WHICH MANY JAIN ASCETICS HAVE STARVED THEMSELVES TO DEATH

The village of Sravana Belgola has a steep granite hill on both sides. The colossus stands upon the southern hill (Vindhya-giri). This picture shows the still more sacred northern hill (Chandra-giri) which has a remarkable group of fifteen ancient Jain temples on its western shoulder—here, the left background. There are also numerous rock-hewn inscriptions recording how, in ancient times, Jain ascetics (both male and female) committed religious suicide by starving themselves to death upon this sacred spot. Of these self-immolations there are numerous pathetic records carved on pillars, erect slabs and the

in which Bhadrabahu died at Sravana Belgola is one of the oldest known, and the important inscription in it makes it more than usually interesting. In Orissa there is a group of very ancient Jain caves situated on two hills, Udaya-giri and Khanda-giri, and some of these date to the second century B.C., perhaps earlier, though others are of later date. One of them, called the Tiger Cave, is very curious. It is hewn from a huge boulder with its exterior cut to resemble a tiger's head with the mouth wide open. Within is a single cell, measuring 6 feet by 9 feet. It was certainly hewn out before the Christian era. Naturally these Jain cave temples show development of design and skill. From the simple cells of the earliest times we can trace the progress to large caves with pillared halls and porticoes, and finally to the elaborate planning and exquisite workmanship of the wonderful Indra Sabha cave-temple at Ellora (see illustrations facing pages 262-265).

The sculptured Jain images also show considerable progress of design, though the colossus of Mysore is in every way unique. We have mentioned four such images that are cut so as to stand free from the rock from which they were hewn. More usual are the figures cut in the face of some precipitous cliff. Those at Gwalior are a good, though later, example. The famous rock of Gwalior, which is about a mile and three-quarters long with an average width of 200 or 300 yards, rises sheer from the plain to a height of about 300 feet. Such a hill was naturally taken possession of by the Jains who built their temples upon the flat summit and cut numerous figures in the practically perpendicular cliffs by which it is surrounded. The former have long since disappeared, but the latter remain although they have suffered severely at the hands of Mahomedan conquerors and British military engineers. Altogether there are more than one hundred of these figures, ranging from quite small ones up to an enormous image 57 feet high—almost as large as the one at Sravana Belgola, but less impressive because it does not stand free. All these Gwalior images appear to have been excavated within a space of about 33 years (A.D. 1441-1474), and though of inferior workmanship, many of them show progress of design in an ingenious device by which the nakedness of the figure is concealed (see illustration facing page 924).

Even then they offended the modesty of the great Mogul conqueror Babar, and he ordered them all to be mutilated.

It is not easy to trace the architectural development of Jain structural temples, for no very early examples have been preserved—nothing that can compare with the early Buddhist shrines of Sanchi or Anuradhapura, illustrations facing page 436-439 and 491-505 respectively. Indeed, Janism can hardly be said to have created a special architecture of its own, for wherever it took root it adopted the local style of building. In North India its temples resembled those of the Vaishnava sect of Hindus, and in South India those of the Saivites.

Perhaps the most characteristic feature of Jain architecture is the crowding together of many small temples upon the top of some sacred hill as a sort of "city of the gods." We have already seen an example of this on the summit of Chandra-giri at Sravana Belgola. A far larger and more imposing, though much later, instance of this is found upon the sacred hill of Palitana in Gujarat. Here, on two summits of the hill, are no less than eleven groups of temples, each group being surrounded by a high battlemented wall. The total number of temples and small shrines at this place exceeds five hundred, and the number of images of the twenty-four Jain saints is very great and is constantly increasing; thirty years ago there were between six and seven thousand of them, not counting the small bas-reliefs and little figures on slabs. There is no doubt that Palitana has been a Jain sanctuary from a very early date, but it is doubtful if any existing buildings date from beyond the eleventh century; indeed, most of them are not older than the fifteenth and sixteenth centuries and onward to comparatively recent years. For this reason, the great sanctuary of Palitana hardly falls within the scope of WONDERS OF THE PAST, and is only mentioned here as an important illustration of the undoubtedly early Jain practice of grouping together a large number of very small temples upon a hilltop. The reasons for this are not difficult to understand. Jain worship was, probably from the first, individual rather than congregational, and there was no need for such large assembly halls as the great Buddhist Karli cave already described by the present writer in pages 441-443. Very small temples served the purpose. Again, the Jains, like the

Photo by the Rev. A. R. Slater.

ONE OF THE FIFTEEN TEMPLES ON CHANDRA-GIRI

The ancient Jain temples on the sacred hill of Chandra-giri are all very small, for instance that of Chandra Gupta himself (see following page), but they are richly decorated with finely carved stonework. The photograph shows the largest of them. The highest structure surmounted by a small dome covers the shrine; before it is a pillared hall or portico; and in front of that (not shown in the picture) an imposing entrance porch with steps. The corner of another "basti" is seen to the left.

Photo by F. Deaville Walker.

TEMPLE THAT IS A LINK WITH CHANDRA GUPTA AND ASOKA

One of the inscriptions on Chandra-giri hill tells how, about 290 B.C., the Emperor Chandra Gupta, grandfather of Asoka the Great renounced his throne and coming to this lonely hilltop lived here as an ascetic for more than a dozen years. The oldest of the temples, called after him the Chandra Gupta Basti (temple), is believed to mark the spot where he died; it is very ancient and quite small. In the above picture it is just visible between the two larger bastis which at later dates were built beside it.

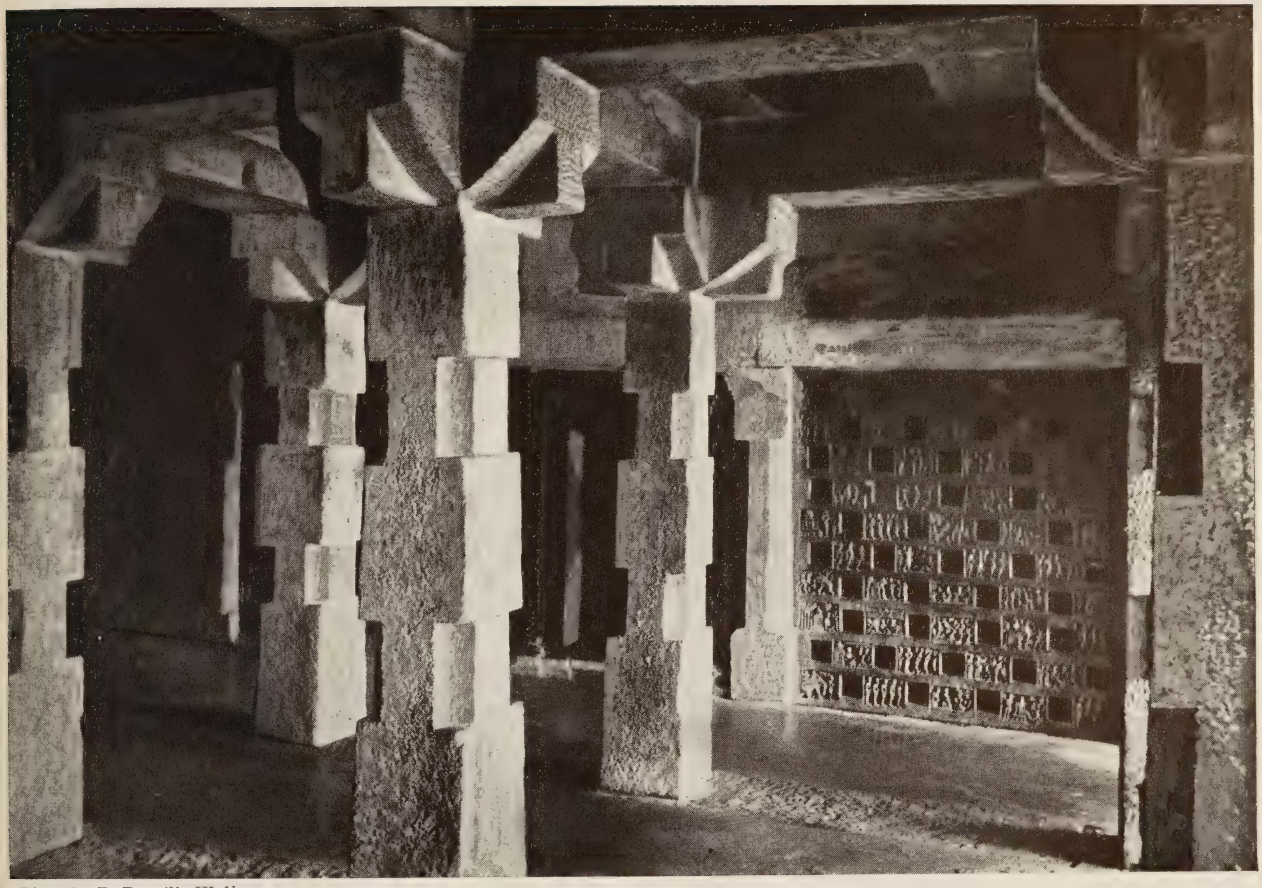


Photo by F. Deaville Walker.

HISTORY OF AN EMPEROR CARVED IN STONE

The most remarkable feature of the Chandra Gupta Basti is a very unusual carved stone screen that separates it from the portico of a larger basti built in front of it. This screen, nearly half of which is visible in the picture, has ninety carved panels which give in bas-relief the story of the erstwhile emperor and his religious leader Bhadrabahu, who also died upon this hilltop nearly three centuries B.C. The screen is in an almost perfect condition, but its age is uncertain. It is certainly very ancient.

Photo by F. Deaville Walker.

CARVED BODILY FROM A HILLTOP: THE COLOSSUS OF MYSORE

Compare the size of this vast image with that of the men standing by its toes! The fingers alone are 5 feet 3 inches long, and the total height is over 60 feet. It was carved nearly a thousand years ago from the living rock; the masses of granite left around the legs to support the enormous weight represent giant ant-hills. The figure is of Gomatesvara, a Jain saint: he is supposed to be wrapt in meditation and heedless of the creepers that have wound their tendrils around his mighty limbs.

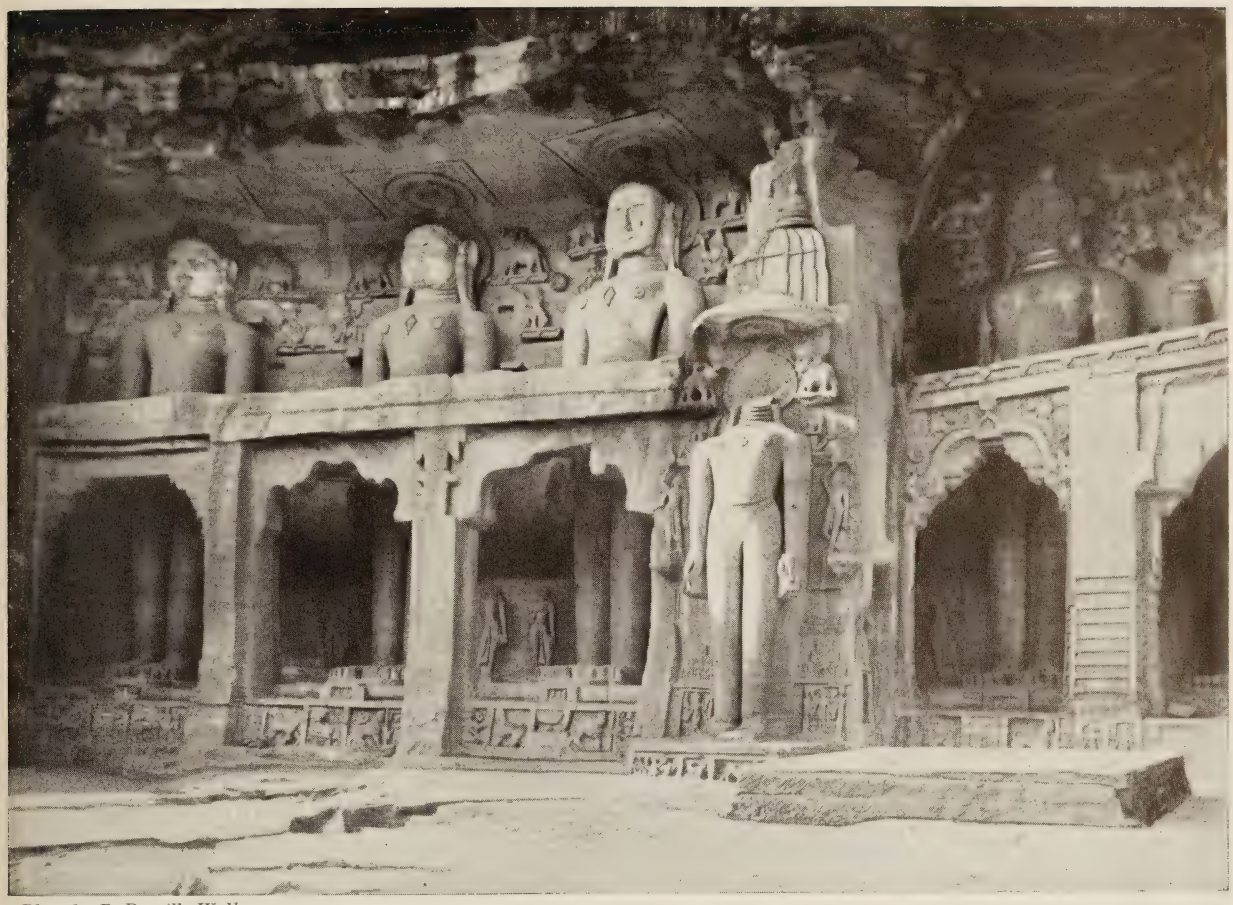


Photo by F. Deaville Walker.

GREAT JAIN IMAGES AROUND THE ROCK OF GWALIOR

About one hundred figures of Jain saints are cut in the perpendicular faces of this famous rock fortress; they vary in size from small ones up to an enormous figure 57 feet high. These Gwalior images are of much later date than the colossus of Mysore and the figures are more "wooden" in appearance. But they show one novel feature: a rock-hewn arcade running in front of the figures to conceal their nakedness—the images of the Digambara sect of Jains are always naked. When the great Mogul Emperor Babar visited Gwalior, his Mahomedan instincts were offended by these figures, and he ordered them to be mutilated.

Photo by the Rev. A. R. Slater.

GRACEFUL JAIN PILLAR THAT HAS STOOD NINE HUNDRED AND FIFTY YEARS

Among the old temples on the summit of Chandra-giri is this beautiful "stambha" or pillar which towers high above all. It appears to have been built about ten years before the colossus on the opposite hill. The pedestal is in three tiers, and the graceful open lantern at the top was probably used for giving light to guide the devout to certain religious ceremonies. Various indications seem to point to A.D. 973 as the probable date of its erection.

Photo by the Rev. Horwood Raw.

STRANGE FANTASY OF THE JAINS, A WONDERFUL HANGING PILLAR

Close to the temple of the colossus is this beautifully carved stone pillar. Though it appears to rest firmly on its base, it is in reality suspended in such a way that it is possible to pass a piece of paper underneath it. On its base Chamunda Raya, who made the colossus, placed an inscription about himself and probably about his image. Unfortunately, at a later date, a man named Kanna had three sides of this precious inscription effaced that he might substitute a brief one of his own.

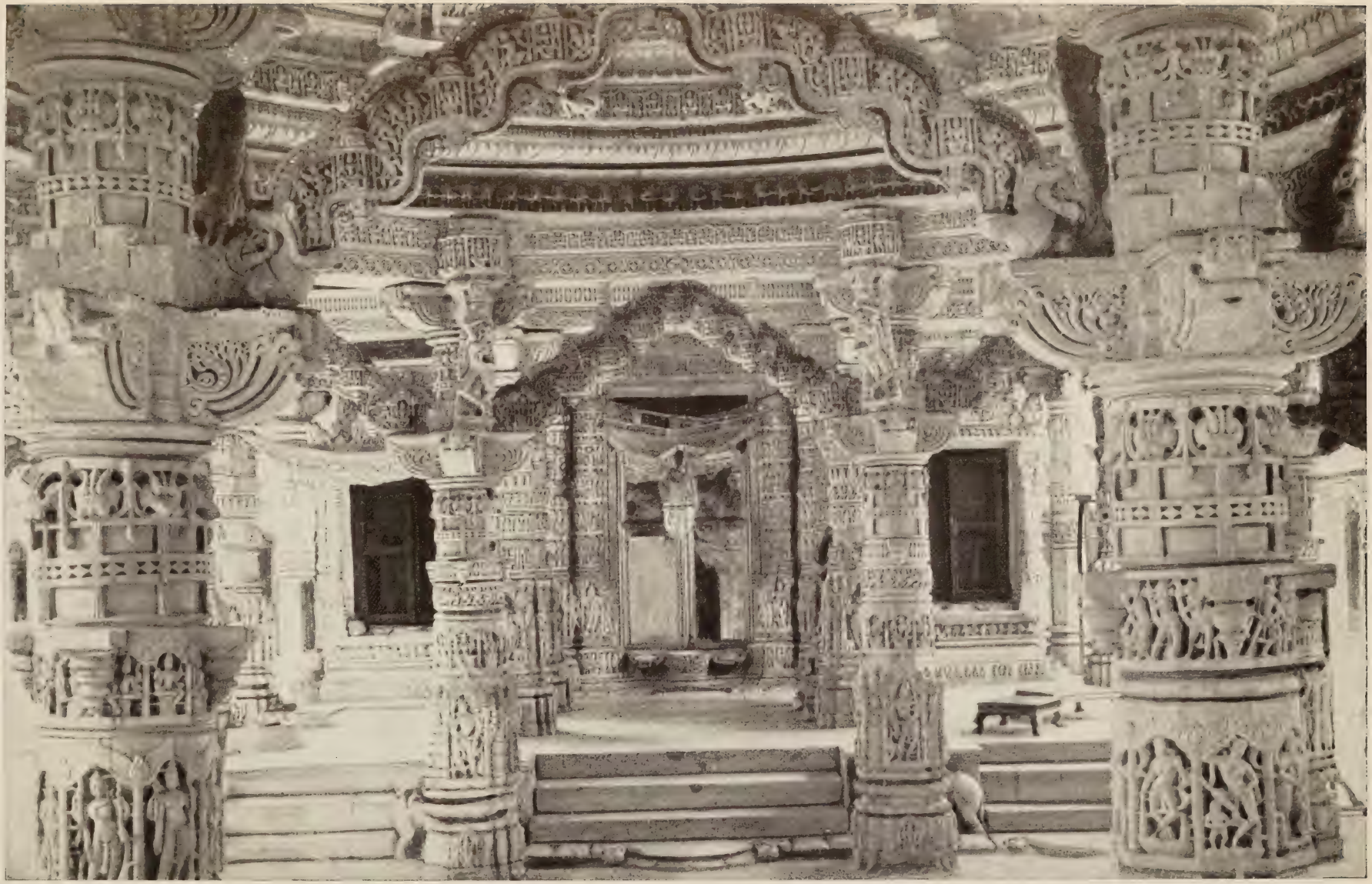


Photo by the Rev. A. R. Slater.

WONDERFUL WHITE MARBLE TEMPLE ON MOUNT ABU

On the summit of a lofty hill in Rajputana are two magnificent marble temples that rank among the finest shrines in India. One was built in A.D. 1031, and the other just two centuries later; this is the earlier of the two—the Temple of Vimala. The marble was brought from quarries many miles away, and the task of transporting the huge blocks up a rugged hill four thousand feet high must have been tremendous. The chief glory of these Mount Abu temples is their splendid carvings; pillars and architraves and domes are all of the finest workmanship. This picture shows the main shrine of the temple, built while Canute was on the throne of England.

Hindus, have always regarded the building of a temple as an act of merit—a prayer in stone. Temple building has been, and still is, believed to be a means of salvation. Most Jain temples, both ancient and modern, have been built by wealthy men of the middle classes who could not, like kings and princes, build on a large scale, and therefore contented themselves with building small ones, taking a keen delight in decorating them as richly as their means permitted. To Jains it is also an act of merit to restore an old dilapidated temple, and this means that many old ones have been "restored" and so altered that it is difficult if not impossible to discover the original form.

There are, however, a number of large and very fine Jain temples that were built in the greatest era of Jain architecture, the centuries preceding the complete Mahomedan conquest of North India. At Khajurho, about 150 miles south-east of Gwalior, for example, are several very fine ones built about the beginning of the eleventh century, notably the Parswanath temple which is one of the most beautiful of its type to be found in India.

But there are two Jain temples which surpass all others—the magnificent white marble shrines at Mount Abu. This remarkable hill rises abruptly from the Rajputana desert and is surrounded by rugged scarps 4,000 feet high. No wonder that from very early times such a hill was deemed sacred. During the age of Jain supremacy it was adorned with two temples which are unrivalled by any temples in India; the one was built in A.D. 1031 and the other in 1230. Both are entirely of white marble, which is supposed to have been brought from quarries many miles away. The task of transporting the large blocks up such a mountain must have been tremendous. These temples are famous for their splendid colonnades and porticoes, their carved pillars and their magnificent domes. "For minute delicacy of carving and beauty of detail, they stand almost unrivalled even in the land of patient and lavish labour." Their courts are surrounded with fifty-two marble cells, each occupied by an image of one of the Jainas. Perhaps the wonderful domes are the most remarkable features of both temples. They rest upon octagons formed by massive architraves across the heads of carved pillars, and are formed by contracting circles of marble finished

with a delicacy of detail and beauty of ornament probably unsurpassed. In the centre of each is "a pendant of such exquisite beauty that those in Henry VII.'s Chapel at Westminster and in Oxford Cathedral are coarse and clumsy in comparison" (Ferguson). Few things are more difficult to photograph successfully than a dome, and no picture can convey a correct idea of the extreme beauty and delicacy of these ornaments.

Though the details of large Jain temples varied considerably, they followed in the main one general plan: a temple with porches standing in the centre of a large rectangular courtyard, which in turn was surrounded with pillared cloisters, at the back of which were long rows of small cells each containing a figure of one of the Jain saints. One other form of architecture peculiar to this great period is seen in the famous Jain tower at Chitor. It belongs probably to the twelfth century and is a singularly graceful building. Standing upon a base 20 feet square it rises in six storeys to a height of 75 feet. Each storey is entirely different from the others both in size and design, the topmost one taking the form of an open canopy with twelve pillars. The whole of this beautiful and unique edifice is covered with a wealth of decoration, amazing alike for its variety, its richness and its restraint; none of it intrudes upon the grace of the whole tower. There is also a second tower at Chitor, built some three hundred years later during a revival of architectural activity after several devastating waves of Mahomedan conquests. It was built in A.D. 1440 as a Tower of Victory to commemorate a great victory over a Mahomedan foe and is considerably larger than its older companion, being over 120 feet high and 30 feet square at the base. It consists of nine storeys, the upper two of which are open and more highly decorated than those below. In outline it is less varied than the older tower, but is exceedingly graceful and although built by a Hindu it suggests Jain influence. The great Italian campaniles of Florence, Pisa or Venice appear stiff and heavy in comparison with these gems of Indian art. Probably there were similar towers at other places in North India, but they have perished. It is not to be wondered at that such elegant structures should fall easy victims to human violence or to the destructive forces of nature, and it is marvellous that these two at Chitor have survived.

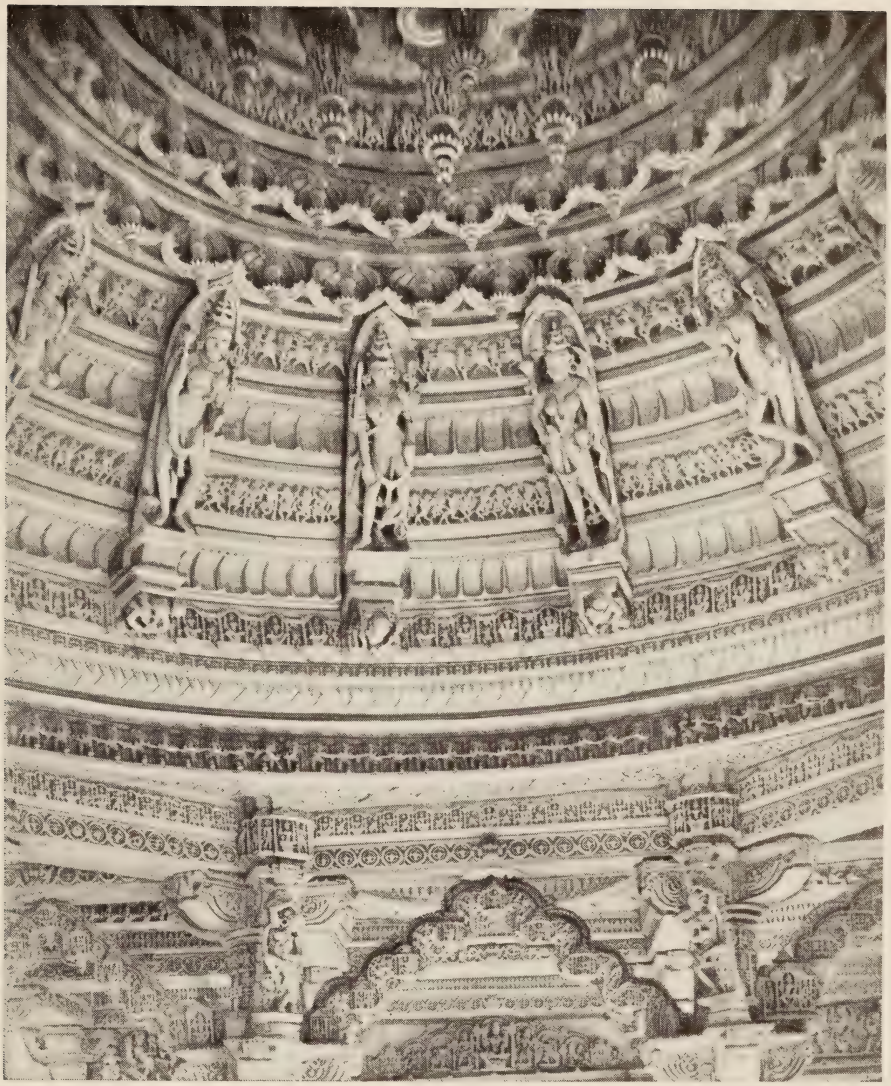


Photo by the Rev. A. R. Slater.

MASTERPIECE OF JAIN ART IN THE TEMPLE OF VIMALA

The finest part of this splendid temple is its beautiful marble dome. It rests upon an octagon formed by massive architraves across the heads of carved pillars, and consists of contracting circles of white marble finished with a delicacy of detail and a beauty of ornament quite unsurpassed. There are sixteen of the statues of which five are seen in the photograph, and in the centre of the dome is a pendant surrounded with a circle of smaller pendants, all of exquisite grace and beauty.

It is certain that many Jain temples were destroyed by the Mahomedans. Others, probably all very large ones, were spared by the invaders and used for their own purposes. It would not be difficult to make the necessary changes; the central temple with its porches would be swept away, leaving the large courtyard surrounded with colonnades; this would require but little alteration, and its "conversion" into a Mahomedan mosque would be complete. It is possible to point to places where this was actually done. There is an outstanding example of it some 19 miles south of Delhi where, about the close of the twelfth century, an important Jain temple was partly destroyed and partly utilised in the building of a great mosque which was afterwards enlarged, and a splendid Mahomedan Tower of Victory—the famous Kutab Minar—built to serve as a minaret. To-day the pillars of the old Jain shrine are still to be seen and are easily recognisable by their elaborate carving and unquestionably Jain devices. They form a splendid colonnade to the inner court of the mosque, and are made the more imposing by domes that also suggest Jain workmanship. It is possible that these pillars may have been moved or re-arranged; but their origin is beyond doubt, and they form one of the many striking features of what was perhaps the earliest mosque in India and which must, in its glory, have been one of the most magnificent. The great mosques of Ahmadabad and Ajmir, also built on the sites of Jain temples, contain signs of their former state.

With the Mahomedan conquests the great age of Jain art ended. But when the first waves of invasion had passed there was a revival of it, and some notable temples were built. An example of this is the large and impressive fifteenth century temple at Ranpur where no two pillars are alike and the light and shade effect is very wonderful. Some very good examples of Jain temples, produced in modern times, show what Jain architects and builders are capable of, if left to themselves. But on the other hand not a few modern Jain temples, like the well-known and much over-estimated one in Calcutta, are feeble and tawdry in the extreme. The greatest age of Jain architecture appears to be in the remote past.

THE GREAT MONUMENTS. X

THE MARVEL OF THE ROMAN AMPHITHEATRE

By J. A. Brendon, F.R. Hist.S.

THE MARVEL OF THE ROMAN AMPHITHEATRE

By J. A. Brendon, F.R. Hist.S.

Author of "The Ancient World," etc.

As the civilisation of ancient Egypt calls to our mind a vision of the great pyramids, and as the culture of Greece may be epitomised in beautiful temples of which the Parthenon is the supreme example, so are there no architectural relics more essentially Roman in execution as in spirit than the amphitheatres—monuments that stigmatise with an anomalous barbarism the culture that produced Virgil and Horace. Not to be confused with the amphitheatres are the theatres of Greece and Rome, where the gentler art of classical drama was fostered, and which in Wonders of the Past *form the subject of an illuminating study from the pen of Professor E. A. Gardner.*—Editor.

ROMAN civilisation is the foundation on which rests a great part of the fabric of society in the world to-day; we can never estimate our debt to ancient Rome. Yet are there not times when we shake our heads and wonder: could a people so cruel as were the Romans really have bettered the lot of suffering man? We see the stain of the great amphitheatres. It fascinates our gaze. For a while we forget Rome's many virtues; we are aware only of her shame. Slaves and hirelings fighting to the death that the lustful blood thirst of their masters may be gratified; noble creatures of the wild goaded to fury that the lords of the earth may be thrilled by the spectacle of human beings struggling with frenzied beasts—that is the stain of the great amphitheatres and nothing can wipe it from memory.

Yet the Spaniards still have their bull fights. Until not very long ago bear baiting was a recognised "sport" in Britain. These, it may be argued, are mild forms of recreation compared with gladiatorial shows. They are milder, no doubt; but the difference

is only one of degree. The Romans were cruel. Theirs, however, was that cruelty born of defective or undeveloped sympathies which, to a greater or less extent, is common to the people of all ages and all climes. There are those to-day who will spend £10 on the hire of a seat whence they may watch two boxers contending for the mastery. Are we to believe that they do this solely because they are connoisseurs of the pugilistic art? Is it simply the wish to see the better side win that attracts 40,000 people to a football match?

We may find nothing harmful in the excitement of the ring; we may have no reason to deprive football crowds of their "innocent amusement." But what will the moralist of the future say? Pliny—a cultured gentleman if ever one lived—saw nothing harmful in gladiatorial fights. Cicero commended them and even the gentle Marcus Aurelius had only one serious complaint against these spectacles of slaughter, and that was that they were merely tediously monotonous.

Gladiatorial fights first took place at Rome several centuries before the Christian era, but then only in connexion with great men's obsequies—as a survival, it would seem, of some old Etruscan funeral rite adopted by the early Romans. Gradually these fights lost their original significance. The people acquired a liking for them and in the later days of the Republic ambitious politicians and men of wealth anxious to curry favour began to organise shows at their own cost simply to pander to the brutal instincts of the mob. In this respect the great Julius Cæsar was a notable offender.

In 264 B.C. Marcus and Decimus Brutus exhibited three pairs of gladiators at Rome at the funeral of their father; Titus Flamininus at his father's funeral in 174 B.C. exhibited seventy-four; a little more than a century later Julius Cæsar, without even troubling to allege an obsequial pretext, treated the populace to a fight between three hundred pairs. His example was widely followed; and under the Empire there came to be hardly a town of any size in the Roman world, from the Trent to the Nile and from the Tagus to the Euphrates, but could boast of regular and frequent shows in its amphitheatre.

The cities of Greece deserve mention as exceptions to this general rule. Outside the hybrid city of Corinth the Greeks

GREAT ARENA AND GIRDLING WALLS OF AN AMPHITHEATRE OF THE "PROVINCIA"

Although one of the largest in France, this amphitheatre at Arles is less perfect architecturally than that of Nîmes. Its greatest length is 149 yards and its shortest axis measures 118 yards. Both storeys of the building are more or less intact (though the crowning "attic" has disappeared) and were built of huge unmortared blocks; both of them are adorned with sixty arcades fronted with pilasters; in the lower the order is Doric, and in the upper Corinthian. Used in the Middle Ages (eighth century A.D.) as a fortress, it was strengthened and had added to it square towers, one of which is seen above.

Photo by Alinari.

AIRY, CIRCLING ARCADES OF THE PLEASURE CENTRE OF ANCIENT VERONA

Taken from an adjacent high building, this photograph reveals in all their majestic beauty the stately proportions of the amphitheatre of Verona. Unadorned by any suggestion of Hellenic inspiration in its architecture, it is thus all the more impressive to-day in its ruined state. The arcades built up of large blocks, are simple to the point of austerity, but their effect on the eye is very pleasing, as they stretch one above the other in a perspective whose effect is rather enhanced than otherwise by the fact that several of the arches of the second storey do not quite conform in size with their neighbours. Before the amphitheatre lies the Piazza Vittorio Emanuele and behind, the streets run towards the Adige.

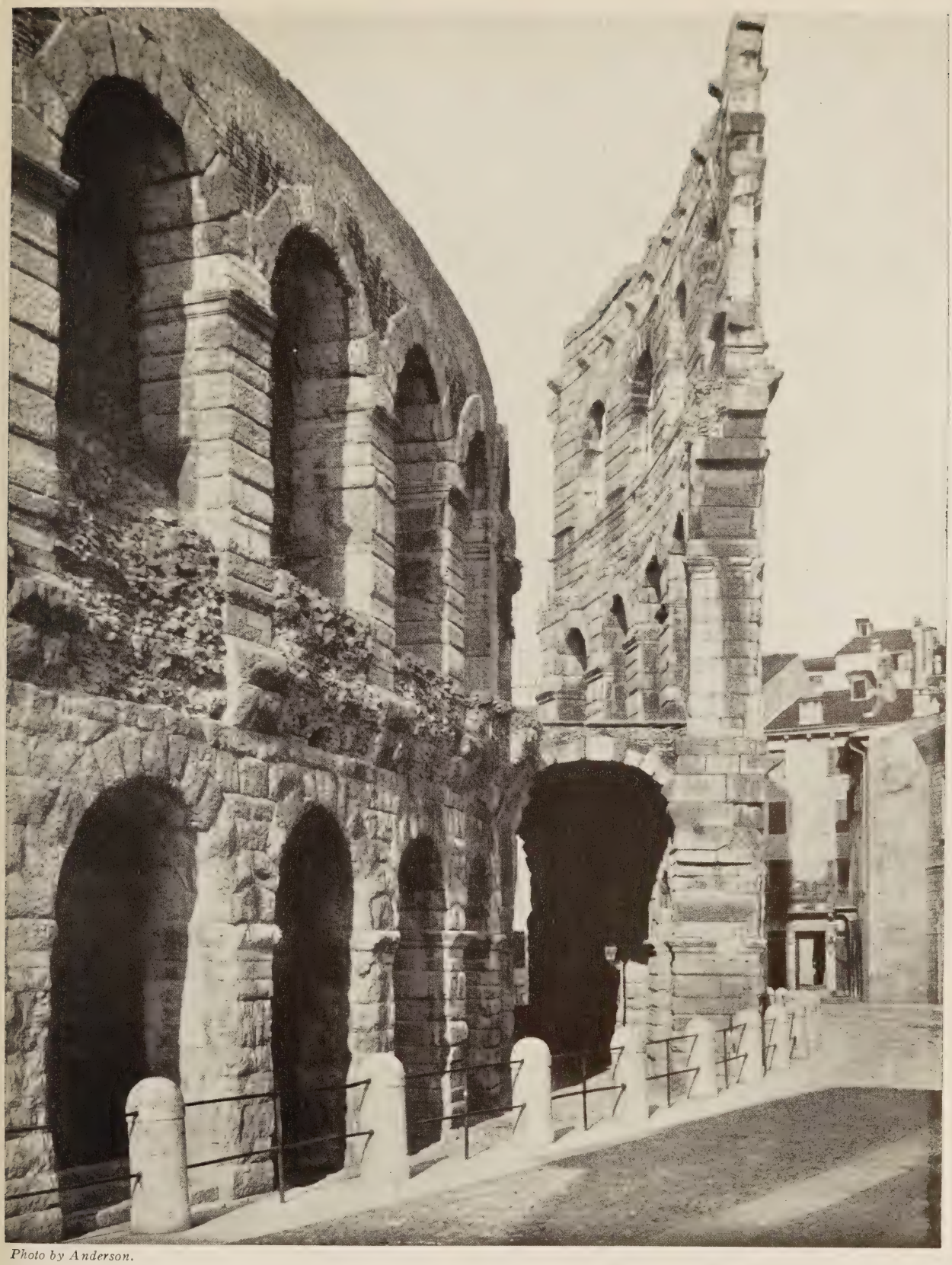


Photo by Anderson.

WHERE GLADIATORS FOUGHT TO THE DEATH IN ROMAN DAYS: THE AMPHITHEATRE OF VERONA

Here is shown on the right the remaining piece of exterior wall seen in the left background in the following page, and though the view is too close for a general impression of the proportions of the building, a good idea of its exterior detail may be gathered. Piercing the beautifully curving inner wall which is virtually complete are the great arches, set one above the other, that give light to the corridors behind them; between the inner and fragmentary outer wall a remnant of one of the perimetral corridors may be seen on the ground level.

Photo by Donald McLeish.

VERONA'S WONDERFUL MONUMENT OF THE EMPIRE

Best preserved of all the Roman amphitheatres as to its interior is that of Verona in North Italy; its proportions are particularly fine and reflect a more cultured art than is found in the colossal Flavian amphitheatre in the capital. Dating from the first century A.D., it is built in three storys and measures 502 feet long by 401 feet broad and 98 feet high. The "cavea" or cup-like interior ranged with seats of brown limestone is nearly perfect, having been used for tournaments in the Middle Ages, but only one piece of the outer wall, consisting of four arcades remains (in the background above).

THE AMPHITHEATRE OF NÎMES, BUILT IN THE ORNATE STYLE

Though smaller than the buildings at Rome, Verona, Pola, Arles and El Djem, the amphitheatre of Nîmes is better preserved than any in its exterior walls. Its major and minor axes are respectively 145 and 115 yards in length, and it rises in two storeys profusely ornamented with pillars. Over each column the line of the entablature is broken by a projecting capital and pediments are found at each end. Illustrated here is the interior in which are 34 tiers of seats rising in four "mæniana" from the podium; the capacity of the cavea was 20,000 spectators who entered or left the building by 124 vomitoria.

VAULTED ARCHES THROUGH WHICH ONCE ECHOED THE CLASH OF STEEL AND THE CRY OF DEATH

Nîmes, the ancient Nemausus, came under the sway of Rome in 121 B.C. and became the chief city of one of the "coloniæ" of Gaul. Nestling near the foothills of the Cévennes, it was always a favourite city of the Romans and their great delight lay in its adornment; many temples were raised (of which the "Maison Carrée" is an outstanding example), a basilica, a theatre, a huge aqueduct, of which the "Pont du Gard" is the glorious relic, and the great amphitheatre illustrated here. No other city of France can boast such a priceless legacy from the great craftsmen of the Eternal City.

AMPHITHEATRE OF ARLES WHERE "GALLIC ROME," CELEBRATED ITS FEAST DAYS

Built in the first or second century A.D., the amphitheatre formed one of the chief buildings of ancient Arelate, seat of the Prefect of Gaul and often visited by Constantine. The great edifice is in an excellent state of preservation in its lower stages, and a clear idea of the structure of arena and podium (the lowest tier of seats) may be gathered from the photograph showing the ancient building filled with spectators assembled to watch one of the bull fights that now take place in it at intervals.

for the most part remained loyal to their art and the precepts of their philosophers. Once it was proposed that gladiatorial exhibitions should be held at Athens. The citizens vetoed the proposal; they refused to overthrow their Altar of Pity. Elsewhere, however, the taste of the Roman populace for scenes of licensed suffering steadily increased. The more the appetite was fed the stronger it grew, and it continued unabated until the end of the Western Empire and even later; gladiatorial combats were firmly abolished only when Theodoric the Goth made himself master of Italy.

The sight of bloodshed provokes a love for it; that is an elementary truth. It can be well illustrated by a story told by one of the Christian Fathers: Augustine (not to be confused with the missionary sent by Pope Gregory the Great to Britain) relates how a friend of his, Alipius by name, was once taken to an amphitheatre against his will. That he might not see the horrors of the arena, Alipius closed his eyes, intending to keep them shut throughout the show. But before long the excitement and shouts of the assembly defeated his resolution. He opened his eyes and looked—looked and was lost. For a moment the scene of hideous slaughter horrified his senses, but it soon intoxicated; and from that day, try though he would, he could not stifle his thirst for similar sights. He became a slave of the amphitheatre.

In the early days gladiatorial combats took place in the forum or market square of a town. There the giver ("editor") of a show would have a temporary wooden scaffolding erected for the accommodation of spectators. But as time went on and gladiatorial combats became more costly and more frequent, some generous donor usually offered his fellow townsmen a permanent building specially designed for these exhibitions,

> And here the buzz of eager nations ran,
> In murmur'd pity or loud-roar'd applause,
> As man was slaughtered by his fellow man.
> And wherefore slaughter'd? wherefore, but because
> Such were the bloody Circus' genial laws,
> And the imperial pleasure.
>
> —Byron: "Childe Harold," iv., 139.

So came to be constructed the great amphitheatres which are in these latter days accounted among the most wonderful of all the wonders of the past. The finest remains are to be found, as one would expect, in Rome itself and in the towns of those western provinces where men drank deepest of the spirit of the Imperial City—at Capua, Pompeii, Pozzuoli and Verona in Italy; at Arles and Nîmes in France; at Italica, near Seville, in Spain; at Pola in Istria; and at El Djem (Thysdrus) and Carthage in Africa. But there were buildings hardly less magnificent in the East—at Antioch in Pisidia, at Laodicea and at Alexandria. Even distant Britain had its amphitheatres, at Cirencester, for example, and at Silchester.

The amphitheatre at Pompeii, it is believed, was the first of its kind to be erected and dates from about the year 80 B.C. It is an immense building, elliptical in shape like all the amphitheatres, and once had seats for 20,000 spectators. That there should have been at Pompeii, eighty years before the birth of Christ, enough supporters of gladiatorial exhibitions to justify this building is a noteworthy fact. The demand for amphitheatres in more important cities must already have been very great. We are apt to think that Pompeii played a big part in history. Really it was a comparatively unimportant city; its tragic fate has invested it in our eyes with a fame that it never enjoyed while it was the home of living men. In the Roman world it was regarded merely as a provincial town.

A certain Gaius Scribonius Curio first gave the citizens of Rome a building specially constructed for gladiatorial combats. In 59 B.C., according to Pliny, Curio erected two wooden theatres back to back and so designed them that when not required for dramatic performances they could be slewed round to form one amphitheatre. Each theatre might be filled with spectators—so Pliny asserts—and the operation performed without even one of them leaving his seat.

In 29 B.C. a less fantastic structure was built, but this, for it had only a shell of stone, was burned to the ground in A.D. 64 when, if the story be true, Nero set fire to Rome. Several temporary amphitheatres were run up to take its place. Then, in A.D. 72, on the site of the artificial lake with which Nero had adorned the grounds of his Golden House, the Emperor Ves-

Specially coloured for "Wonders of the Past."

SIMPLE GRANDEUR OF THE AMPHITHEATRE AT POLA

Though situated far north of the great capital, Pola can boast an amphitheatre which is no unworthy rival of the Colosseum; its comparatively unadorned exterior is all the more imposing by reason of its simplicity. The curving wall through which we catch a glimpse of the grass carpeted arena, the scene of "old, unhappy, far off things, and battles long ago," seems almost fantastically light; yet a mere glance at the nearer side will reveal the great size of its unmortared blocks.

pasian began the construction of the Colosseum, the most sublime effort of Roman architecture, Rome's glory and her shame. The work was completed in the reign of the Emperor Titus, the capturer and plunderer of Jerusalem, and by him inaugurated in A.D. 80. Never before had Romans been treated to such an orgy of blood. For a hundred days the inauguration games went on continuously; thousands of gladiators perished, thousands of wild beasts.

The Emperor Trajan outdid even this grisly achievement. To celebrate his "triumph" over Decebalus the Dacian king, in A.D. 106, he sent down into the arena 10,000 men. The Emperor Claudius, however, organised the most brutal perhaps of all the exhibitions given at the Colosseum, or the Flavian Amphitheatre as we should call it if we would be pedantically correct (see illustration facing page 402). Claudius, an imbecile as cruel as he was mad, lived only for the pleasures of the arena. Day after day he would sit in his chair of state, from morning to night, leaving it only to urge the fighters on.

In the later years of the Middle Ages the Colosseum was used literally as a quarry. Vandal hands stole from it an immense quantity of marble and other stone. It remains, however, one of the most stupendous of all memorials of the past. Wrote Byron:

> A ruin!—yet what ruin! from its mass
> Walls, palaces, half-cities, have been rear'd;
> Yet oft the enormous skeleton ye pass,
> And marvel where the spoil could have appear'd.
> —"Childe Harold," iv., 143.

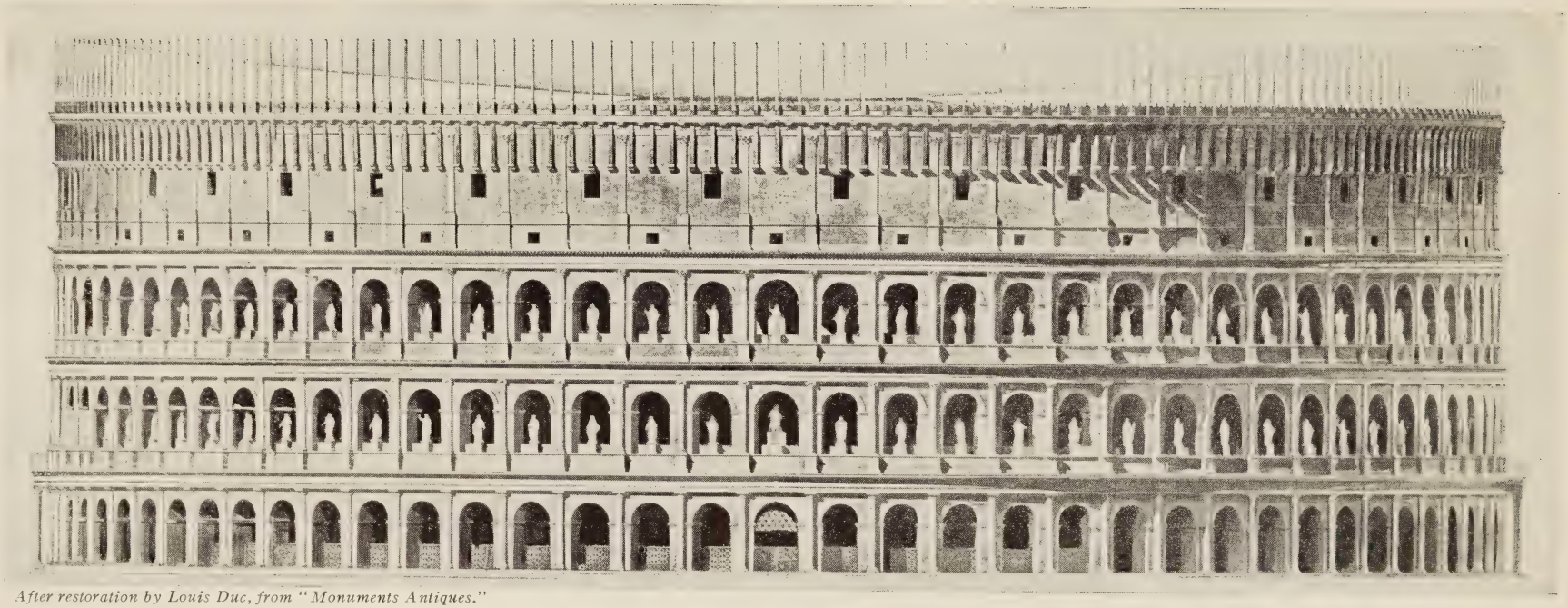
The greatest length of the Albert Hall in London measures 270 feet; the greatest breadth, 240 feet. The corresponding dimensions of the Colosseum are 615 and 510 feet. This bald comparison gives a clearer picture of the size of the building than could pages of description. According to a fourth century authority, the "Notitia Urbis Romæ," the Colosseum could accommodate 87,000 spectators. Until recent years the figure was generally accepted. It has now been discredited, but the most cautious calculation cannot reduce the number of seats to

fewer than 45,000; in addition, there was standing room for 5,000 persons at least—probably for many more. The Colosseum, too, was only one of the great amphitheatres of Imperial Rome. Remains of another, the so-called "Castrense" Amphitheatre, which dates from the time of the Emperor Trajan, may still be seen.

All the great amphitheatres were designed in imitation of the plan which inspired the builders of the Colosseum, though they differed one from another in the details of their construction. In many cases advantage was taken of natural features of the ground and the buildings were placed in depressions between hills; this saved the expense of a lofty enclosure round the seats. Some amphitheatres, that at Silchester for example, were formed mainly by the throwing up of an embankment; others, like that at Pompeii, seem to have been excavated rather than built. At Pola only the outer walls now stand. The presumption is that in this vast circus, as we know to have been the case in many smaller buildings of the kind, the seats were made merely of wood. The Colosseum was furnished with seats of marble, and the extent of each was marked by grooves cut in the stone. At Pompeii also the seats were of stone and numbered; tickets for them could be booked in advance.

The outer wall of the Colosseum, 157 feet in height, was built of travertine stone and divided into four storeys. Eighty arcades pierced each of the three lowest. The topmost was of solid masonry, broken only by forty small windows to admit light and air to the passages surrounding the building; and attached to it were brackets to support the poles on which sailors specially employed for the purpose stretched the awning. The arcades of the lowest storey served as entrances; two were reserved for the Emperor, while seventy-six could be used by the general public. The two remaining ones gave access only to the arena.

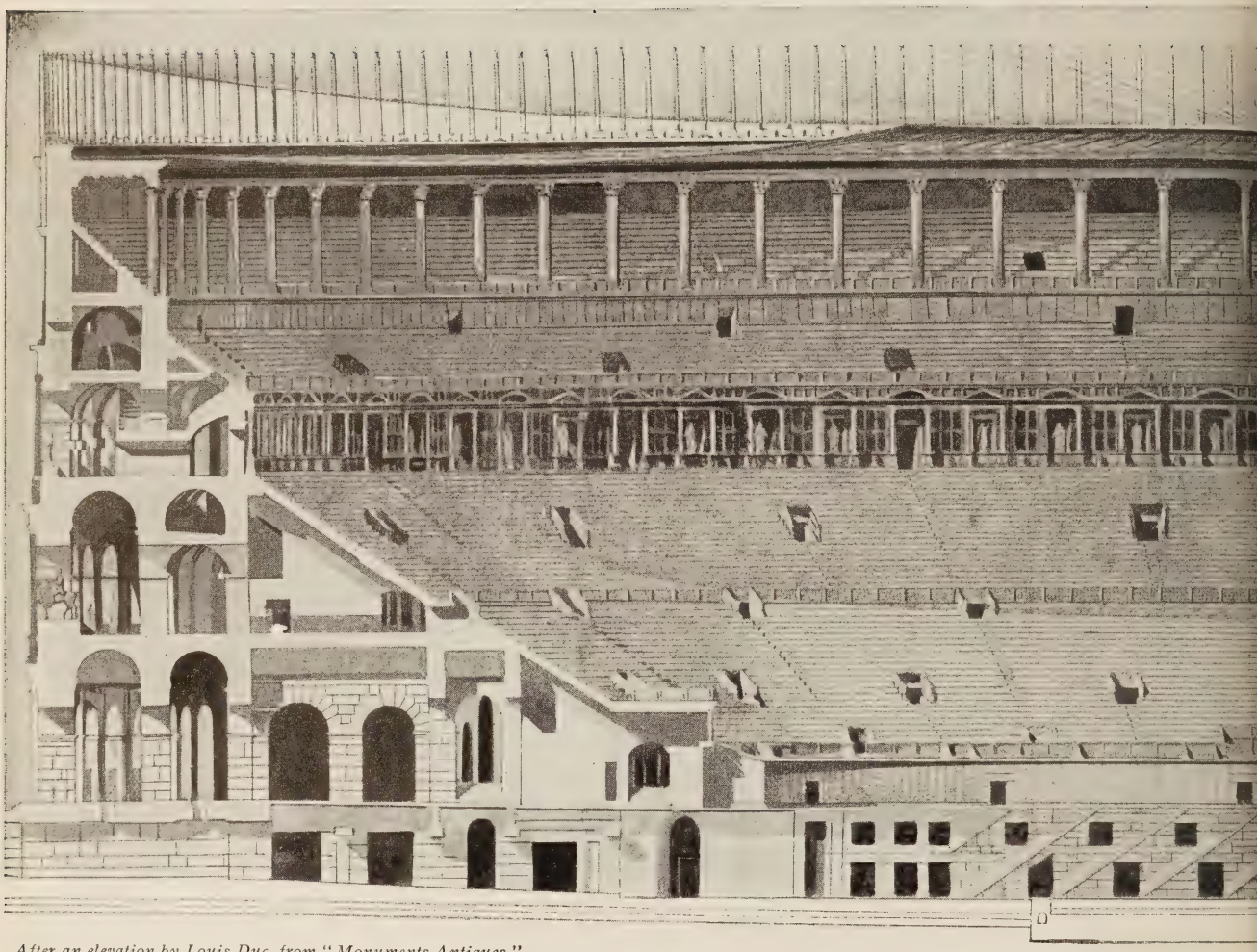
That part of an amphitheatre devoted actually to combats came to be known as the "arena" because normally it was strewn with sand (Latin: "arena," sand). Blood is readily absorbed by sand. Some emperors, however, eager to heighten the baser attractions of the entertainments they provided, deemed sand too commonplace a substance for the purpose, and at the Colos-



After restoration by Louis Duc, from "Monuments Antiques."

VIEW IN ELEVATION OF THE GREAT COLOSSEUM OF ROME

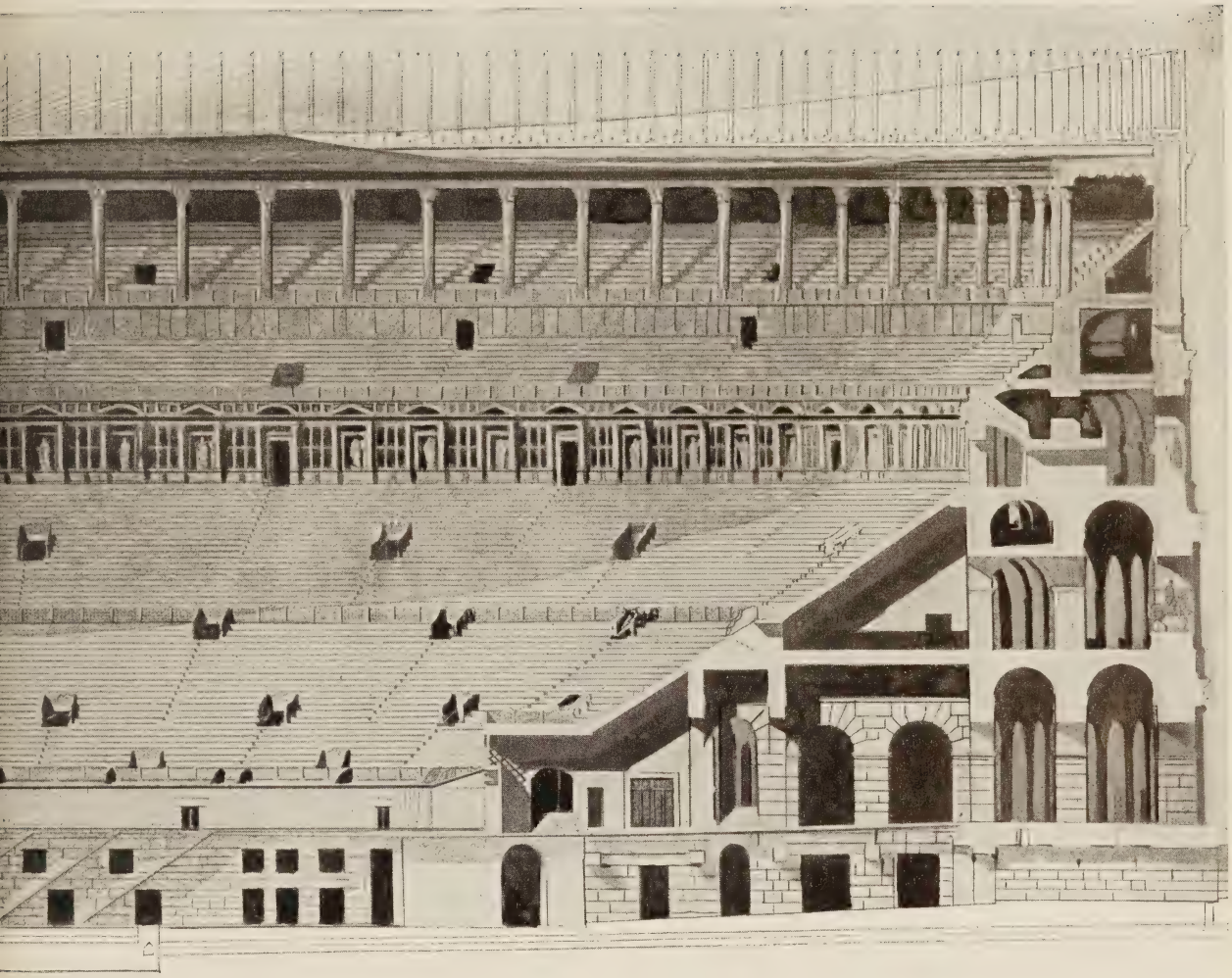
Few more impressive monuments of antiquity exist to-day than the Colosseum. Rising 157 feet high, its outer wall was built of travertine limestone faced with marble and divided into four storeys the three lowest ones being pierced with eighty vaulted arches adorned with statues, and the fourth (topmost) of solid masonry into which are introduced forty ventilating windows. Each arcade is surmounted by an entablature that runs in an unbroken line right round the building. The orders of the various arcades are as follows: Lowest, Roman Doric; second, Ionic; third, Corinthian; the heavy top storey with its Corinthian pilasters was built solid to give the necessary support to the heavy masts of the velarium.



After an elevation by Louis Duc, from "Monuments Antiques."

SECTIONAL VIEW THROUGH THE MAJOR—

From this drawing the structural detail of the Colosseum, the greatest of all the Roman amphitheatres, may be clearly understood. The whole of the "cavea" (interior) was divided by "præcinctiones" (terraces), running all round the building, from which rose the "mæniana" (ranges of seats); of these the lowest tier of all, the "podium," was sacred to the use of the Emperor and religious and state dignitaries. These mæniana were accessible at numerous points from corridors on all floors connected to each other by staircases, some of which also led to the "vomitoria," or doors giving access to the cavea. The arena was surrounded by a perfectly smooth high wall to guard the spectators



—AXIS OF THE FLAVIAN AMPHITHEATRE

against any danger from the wild beasts, and a further protection was provided by a trellised rail above the wall. Under the sand-strewn arena is indicated the complex cell system provided for housing the gladiators and wild beasts taking part in the show—these cells communicated with the arena by means of trapdoors and entrances in the wall. Above are the masts and cordage which supported the "velaria" (awnings).

BEAUTIFUL ARCHES FROM WHICH THE PEOPLE OF POLA WATCHED THE FIGHTS OF GLADIATORS AND WILD BEASTS

The Italian town of Pola in the once Austrian district of Istria is particularly rich in Roman buildings, and of these the greatest is the amphitheatre built about the same time as that of Verona towards the end of the Western Empire. Its outstanding architectural feature is its topmost "attic" course which is pleasingly light in comparison with that of the Colosseum, and obviously designed for no other purpose than to support the masts of the "velarium" (awning). Greek forms are not found here at all, and only plain pilasters adorn the arches; unconventional also is the breaking of the curving perspective of the arcades by the introduction of projecting staircases of which two are seen above.

seum costly powders were often scattered on the floor, sometimes even gold dust; and, that the air might be kept fresh and clean, fountains shot aloft cooling sprays of perfumed water. A wall, so smoothly built that no wild beast could scale it, divided the arena from the "cavea," where sat the spectators. Such a wall formed a feature of all the amphitheatres; and as an additional precaution a metal railing also was usually provided. At the Colosseum there was a ditch as well. The arena of the Colosseum moreover was so designed that it could be quickly flooded. This was a refinement possessed by no other amphitheatre. Even at the inauguration shows the Emperor Titus was able to vary the monotony of the proceedings by the introduction of "sea fights."

In several of the great amphitheatres may be seen the remains of subterranean vaults. The amphitheatre at Capua is a case in point; that at Pozzuoli is another. Under the Colosseum is to be found a remarkably elaborate system of passages and chambers. From these, by means of ingenious movable platforms, gladiators and beasts could be raised through trapdoors into the middle of the vast arena.

It was usual for the cavea of an amphitheatre to be split up into several galleries concentric with the outer walls. The gallery nearest to the arena, the "podium," was the place of honour. Here in a provincial amphitheatre sat the leading personages of the town and the giver of the entertainment. Here at the Colosseum sat the Emperor, the senators and the chief officers of State; here too (prior to A.D. 394) sat the Vestal Virgins, custodians of that sacred fire which Æneas was supposed to have brought to Rome from Troy. Above the podium, and extending right round the building, were three other great galleries divided vertically by stairs into wedge-shaped blocks and separated one from another by terraces and walls. The lowest of these reserved for members of the equestrian order —the knights. In the others sat people of less degree, row above row; thousands and tens of thousands of toga-clad men, some with wives or daughters, some with sisters, some with sweethearts, assembled in that place—for what? To see a score of their fellow men meet death, perhaps a hundred if they should be lucky. And above them, again, standing on the portico over the top-

most gallery, those who could not find seats, many thousands more, eager for the same sight.

* * * * * * *

A procession of gladiators opens the proceedings; then the testing of weapons by the giver of the show; then the customary sham fight—tedious preliminaries. Many find the programmes of greater interest; in them are set out particulars of the coming fights and the names and records of the combatants. Ah! Pugnax, in the Thracian arms, drawn with Murranus fighting in the arms of Gaul! A well matched pair! Which of them will win? Will one or the other die? Or will the crowd show mercy to the vanquished? These are questions anxiously debated.

Suddenly a trumpet blares, and blares again. It is the signal for the fighting to begin. Pugnax is already in the arena. Now comes Murranus. The dense throng watches his movements, spell-bound. Sword clashes upon sword! Then "Habet!" —"wounded!"—a great cry goes up from the assembly. "Habet!" it echoes round the arena. And Murranus, blood streaming from a gash in his side, reels to the ground. The stricken gladiator raises himself feebly on one elbow and extends a forefinger. He is asking for mercy. It is for the spectators to grant or refuse his appeal. How will they decide? Will they turn their thumbs downwards, and so sign to Pugnax to spare his victim, or will they point their fingers to their breasts? Or will they wave their handkerchiefs? This, according to some authorities, was the token of mercy, the turning down of thumbs the token of death. It is strange that scholars should not yet have settled this question for us. They still debate it and still agree to differ. But what does it matter? Murranus, if spared, is only spared that he may die another day.

Attached to most of the big amphitheatres were schools for gladiators managed by the State. Many individuals, at great profit to themselves, also conducted such schools; at the smaller provincial cities there was a constant demand for itinerant gladiators. Though well fed and well cared for (the farmer cannot afford to treat his cattle badly) the pupil in these schools were subjected to a rigorous and terrible discipline. Of the sixty-three bodies of gladiators found among the ruins of the schools

EXTERIOR VIEW OF THE GRANDLY IMPRESSIVE AMPHITHEATRE OF EL DJEM

Wherever Roman civilisation penetrated it left an imperishable imprint in the monumental buildings it raised; thus is it that in the almost deserted region of El Djem in Tunisia stands this magnificent ruin like the mighty guardian of a squalid Arab village beside it. Built about A.D. 240 of limestone, it consists of three arcades crowned by a fourth storey of windows; the first and third arcades are Corinthian, the middle composite. Its measurements are: along its greatest axis, 488 feet and along the shortest, 406 feet. The staunch nature of the building is well seen in the photograph; on the right the outer wall has been broken, doubtless by later builders in search of material for their mean erections.

at Pompeii many were in chains. Precautions had to be taken by those in charge lest these professional fighters should anticipate by self-destruction their inevitable end. After all, they were recruited largely from slaves and criminals reprieved from sentence of death.

But not all of them were the dregs of society. Many a young man of birth and education was lured by the false glory of the arena to adopt this hideous calling—even senators and noble ladies. Several of the emperors, moreover, delighted in gladiatorial exercises, and at any rate one of them, Commodus, actually appeared in the arena. The life of a gladiator had its compensations. The mob, in all ages, is ready to make a hero of the man who excels in feats of physical endurance, and the Roman mob was no exception. To the successful gladiator it accorded a notoriety unknown even to the professional athlete who lives in these days of cinemas and illustrated papers. His name was on everybody's lips. His exploits were widely discussed. His portrait was multiplied on innumerable rings, lamps and vases. Great ladies only too often contended for his favours. Many gladiators, again, were prisoners of war, gallant "barbarians"—men like Spartacus, the Thracian, who led the great gladiatorial revolt of 73 B.C. and for three years defied the legions of Rome; men like those who stood by Antony after Actium. Cæsar's rival, Cleopatra's paramour, deserted in the hour of defeat by all his friends, could count at least on the loyalty of the gladiators he had enrolled to celebrate anticipated victory.

Sometimes it happened that gladiators had to be urged into the arena by whips and hot irons. The majority, however, learned to die like men, and have handed down to us an imperishable tradition of spirit and dignity—"Ave! Imperator, morituri te salutamus!"—"Hail! Cæsar, about to die we salute thee!"

TEMPLES OF THE GODS. XVIII

OLYMPIA AND ITS SACRED GAMES

J. A. Hammerton

OLYMPIA AND ITS SACRED GAMES

J. A. Hammerton

RAIN-MAKING is a great business among primitive peoples in arid lands. It is a large element in their religions, and it is astonishing how nicely the wily old medicine men will organise a sacred rain-making dance which will not have finished ere the first drops begin to fall! An easy step in the practice of magic takes one from rain-making to making the fields increase their crops and the useful beasts to bring forth young. To-day, just as in the dimmest past, the highly skilled magicians who can do these things become the chiefs as well as the priests of their peoples. Oddly enough, the most remarkable of the rain-makers in European history ended as victors in a short sprinting race in the Greek games that were held at Olympia.

The story ran that ancient Greek rain-making kings had to stand to battle, every summer, against any young challengers, and prove that their productive strength was as good as ever by killing each upstart and adorning the palace with his head! There was a similar ordeal in the days of early Rome, when the priest-king who served the temple of Diana in the grove of Nemi amid the Alban hills had to defend himself in arms against anyone who tore a bough—"the Golden Bough"—from a sacred tree; if he fell, the victor took over his post as priest and king of Nemi until, in his turn, he went down before a stronger.

In Rome the problem of maintaining the traditional struggle was eventually solved in a vulgar, practical way by giving fugitive criminals the chance of fighting for the Nemorian kingship. But in Greece the invading Greeks showed finer feeling and re-

duced the struggle for kingship to a short foot race. Bringing their power of imagination to bear on the difficulty, they produced a romantic legend concerning the fight of one of their early kings and the last of the native monarchs of Mediterranean race, who was killed by his own spear during a murderous pursuit of the young invader of Southern Greece. The pursuit was then mimicked by the short foot race for which any ambitious young Greek could enter. So the real king freed himself from the robes and troubles of the ancient magicians and the gallant winner of the race was honoured as the visible incarnation of a spirit of fertility, at once divine and regal. For some centuries these Olympic games were a local affair, but after the Dorian conquest of Southern Greece Lycurgus (Lykourgos) of Sparta and Iphitos of Elis, in the ninth century B.C., elevated the festival into an affair of general importance. What the scattered British peoples are now doing by cricket and football matches between the motherland and the dominions, under something like direct inspiration from the tradition of the Olympic games, Iphitos and Lycurgus developed into a means of keeping the jarring Hellenic nations consolidated in spirit.

The priesthood of Delphi, the centre of Hellenic religion, helped. An arrangement was made for a truce of god to hold between all Greeks for the festival month, and instead of an annual performance which would have been too great a strain upon the clans, the games were fixed to take place every fifth year at the first full moon after the summer solstice. Underlying superstitions were also altered; the primitive rain-maker almost disappeared; the victor became Herakles in his most sacred aspect. As such he was greeted, crowned with the divine olive, and led to a feast on a holy bullock of Zeus. Returning to his native city, the winner was clothed in purple and drawn by white horses through a breach made in the ramparts of his town; in many cases he was worshipped even after death. This was not because he had been a successful athlete, for the Greek love of beauty in strength never went so far as that; the Olympian hero was adored as an incarnate god.

To him in his successive incarnations was built the glorious festival city of Olympia amid the mountains of the north-western region of the southern Greek peninsula, the Peloponnesos. The

Valley of Kladeos Theatre Arcadian Mountains Hill of Exedra of

After a reconstruction by Bühlmann

FAIR TEMPLES AND SACRED PRECINCTS OF OLYMPIA—

Gymnasium Philippeion Heraion Pelopeion

—WHERE GREEK MANHOOD RACED FOR A LAUREL CROWN

Enclosed Grove of Altis
Agora
Stoa Poikile
Temple of Zeus
Gate of Processions

beautiful site lay immediately beneath the conical height of Kronos and occupied the angle between the Alpheios river running south and its tributary stream, the Kladeos, forming the western boundary of the sacred precinct. From the hillside there extended the holy grove or "Altis," measuring 218 by 153 yards, enclosed by a wall with three gates, a triumphal arch and a secret entrance. The actual grove had vanished save for one most holy tree, represented by a decayed wooden pillar held together with metal bands and protected from the weather by a small roof on four columns.

This, with a neighbouring altar to the thunder god, was probably the original shrine in the days of contending rain-making kings. About it had grown a forest of works of art. The first was the Heraion, the most ancient temple in Greece, that retained one of its original wooden columns and part of its primitive clay wall with a timber entablature, clearly showing how the Dorian style of architecture had developed out of clay and wood construction. It contained the largest known collection of gold and ivory statues, none later than the sixth century B.C., and a gold and ivory table on which the olive wreaths granted to the victors were laid.

South of this antique work was the more modern glory of Hellas in the age of her splendour—the temple of Zeus, centre of the Greek religion. It was a limestone building in Doric style, 70 yards long, 30 yards broad and 22 yards 5 inches high, erected about 472 B.C., just before art reached its supreme perfection. The western pediment was adorned with sculptures of Lapiths and Centaurs by Alkamenes, and the eastern pediment contained groups by Paionios representing the victory of Pelops over the native rain-making king. By their great figure compositions these sculptors showed the way to Pheidias who later surpassed them in his designs for the Parthenon at Athens. But in return for what he had learned Pheidias made the Olympian temple more awesome than the Parthenon by modelling in gold and ivory its collossal statue of Zeus. The image, 40 feet high and made of materials costing perhaps two hundred thousand pounds sterling, was enclosed by screens in the nave of the shrine and covered with a purple fabric only removed on solemn festivals. The god was then seen sitting on a throne, holding the

figure of Victory in his right hand and an eagle-crowned sceptre in his left. An extraordinary variety of secondary designs in relief and colours covered the throne, footstool, pedestal, barriers and garment of the deity, every scene and figure showing forth the just and merciful ways of the divine father of gods and men.

Yet all the ornament was subdued to the main effect. Upon the mind of every thoughtful Greek of the age of Perikles the unveiled face of the Pheidian Zeus struck with the force of a new religious revelation. Instead of the commonplace strong features of the fierce omnipotent spirit of the thunderbolt, like a Greek Jehovah, here was revealed a mild and fatherly face with calm eyes and broad brow, inspiring love and awe. Not only was Pheidias the greatest of all men of art; he was something of a philosophic prophet, working out a gospel in stone and ivory. A reconstruction in colour of his masterpiece appears facing page 320.

Almost as great in importance as the Temple of Zeus was the multitude of statues of victorious athletes that peopled the open space. It was from the labour of modelling the perfect bodies of young men as Olympian offerings that Greek sculptural art grew in glory. At first each winner had been hailed as "King Herakles." Then, as poetry became the leading art, men of high genius like Pindar acclaimed and spread the fame of the victors by magnificent odes. Finally, when the sculptors completely developed their high craft, their finest achievements in single male figures were used as perpetual memorials of the winners. Something sacred attached to the images, for these represented incarnations of divinity often worshipped, as we have seen, after death. Those who won one game were shown in ideal form; those who won three games had their individual features portrayed. There may have been at least five hundred portraits and athletic types of the highest varieties of art before Roman consuls and emperors robbed the holy enclosure of many of its marvellous masterpieces. Even when these barbaric spoilers had seized every athletic figure they thought worth taking, there remained in the second century A.D. some two hundred votive statues for the traveller Pausanias to select for admiring comment from the rest of the marble multitude. None now exists. The only victors that preserve their fame

among men are those commemorated in choral lyrics instead of being visibly portrayed in bronze and stone. The verbal music of Pindar has proved more lasting than the marble that Pheidias shaped into the figure of the victor of his day.

West of the sacred enclosure, and divided from it by a fine colonnade decorated by masterpieces of painting, was the famous stadium or foot race course, the 600th part of which was the standard measurement of an Olympic foot equal to 1.05 English feet. The race was a straight sprint from a low starting wall to a low goal wall of 630.818 English feet. On artificial embankments around there was room for 45,000 spectators. Beyond the southern embankment was a great Hippodrome built for the later game of chariot racing that attracted the gorgeous tyrants of Sicily and aristocrats of Ægina. The chariot race seems to have been founded in 680 B.C.; the horse race in 648 B.C., together with the horrible game known as the "pankration"; and the race of soldiers in heavy armour in 520 B.C. The main general event, however, was the old five-fold contest of "pentathlon"—jumping, quoit-throwing, running, wrestling and boxing—that had been organised in 708 B.C. The ancient foot race for godhead was distinct from these events and was rewarded by a separate crown of olive leaves.

Each competitor had to swear he was of pure Hellenic breed, that he contended without any unfair advantage and that he had spent ten months in strict training. Some of the keenest candidates indeed came to Olympia to train. Twelve cities, including Syracuse, Cyrene, Sybaris and Gela, possessed temple treasuries by the enclosure in which were stored offerings and weapons and instruments for their competing young citizens. Ten months before the festival umpires of the games were chosen, numbering first one for each clan but finally fixed at ten. They likewise had to go into training for all details of their work, assisted by heralds, trumpeters and stewards. Under title of Judges of the Hellenes, they occupied a mansion in the enclosure and prepared to feast the victors on a dedicated bull, in a kind of sacrament.

When Olympia came fully to life in the grand festival, the city was one of the supreme spectacles on earth. Republican states sent embassies; monarchs came in person with lordly reti-

nues; far-flung colonies from Marseilles to Trebizond, from Cyrene to Cyprus, despatched their best boys and young men with parties of older friends. Gorgeously attired barbarians were attracted by the sight of the most intellectual and enterprising of nations strangely putting off war and business for the chance of winning a handful of olive leaves. "What is the use of trying to subdue men like these?" said a great Persian commander. "They are eager to struggle without necessity or hope of real reward." Not only was this so, but monarchs, like Hiero of Syracuse, would risk their reputation in the contests. Few were the victors and many the vanquished, and for beaten men there was nothing but shame. Upon them fell the anger of the spectators. Assailed by gibe and ridicule, the best they could do was to creep away over the mountains. According to primitive custom they should have been killed; instead, as a matter of ritual, they were subject to public dishonour.

In the "pankration" game there was indeed an approach to the original slaying. It was a revival of the lust for blood. The game was a combination of boxing and wrestling in which every form of violence except biting was permitted. A fall did not end the struggle, which continued on the ground until usually the weaker man was strangled or stretched helpless with fingers and toes broken. To the credit of Sparta, she would not allow any of her sons to enter this murderous game. Boxing was also forbidden to Spartans, because a heavy metal instrument was used in the hand with ridges of thick, hard hide.

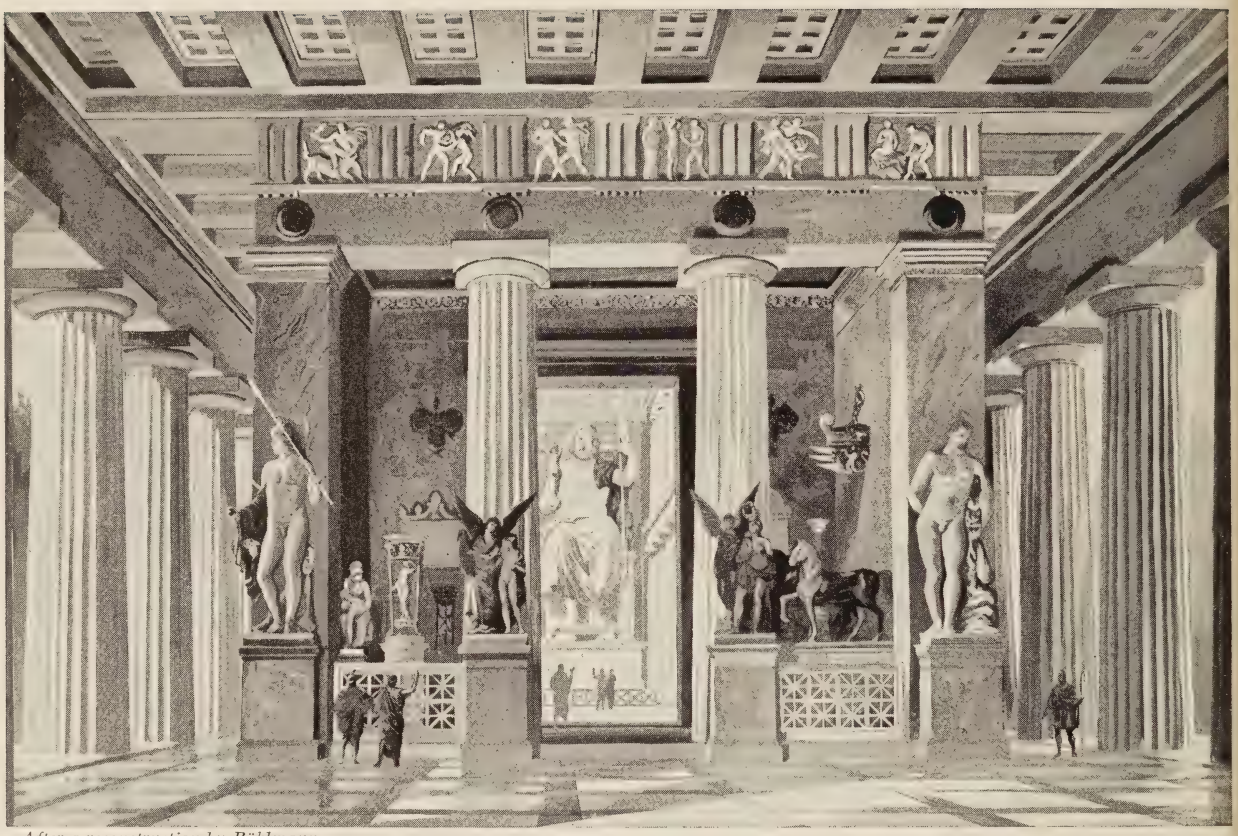
The maiming and killing brought Olympia into disrepute. Not only the Spartans but other Greeks of the best sort withdrew from the games. Professional strong men entered as candidates, and wagering on the events grew apparently so widespread as to make it worth while for a Thessalian prizefighter in 388 B.C. to bribe three opposing boxers to lose their matches. As one of the boxers who arranged to accept defeat had been champion at the previous festival, there was apparently a good deal of money staked on him. Vainly the later Macedonians and Romans, including Nero, tried by lavish patronage to raise the games again to the high level.

The sacred festival became a vast fair, with myriads of booths filled with idlers, pleasure-mongers and the scum of so-

After a reconstruction by Bühlmann.

A TENSE MOMENT IN THE OLYMPIC STADIUM

The accompanying illustration in tints is a panoramic reconstruction of the precincts of Olympia; but it must be remembered that all the buildings there shown were not standing in the days of Olympia's greatest renown. The Stoa Poikile (Painted Porch), or Echoing Porch as it was also called, was Macedonian for instance; while the Exedra of Herodes Atticus was not built until A.D. 157. Here we have a reconstruction of the Great Stadium at the culminating moment of the famous foot race; judging the contest on the right are the Hellanodikai, the umpires or "Judges of the Hellenes."



After a reconstruction by Bühlmann.

ZEUS AND HERAKLES ENSHRINED IN THE ALTIS AT OLYMPIA

Looming majestic through the cella door is the colossal gold and ivory statue of Zeus, by Pheidias, seen in imagination from the portico of his temple at Olympia. Over the pronaos and opisthodomos, corresponding in position to the end frieze of the Parthenon, were metopes showing the twelve labours of Herakles—almost all of them have been recovered by the Germans and the third from the right here is the well-known one of Herakles relieving Atlas of his task. The statue of the hero on the right is reconstructed by reference to the work of Glykon after Lysippus—the "Farnese Hercules" in the Naples Museum.

ciety. As Professor Mahaffy remarks, "tumbling, thimble-rigging and fortunate-telling, along with love-making and trading, made Olympia a scene not unlike the Derby." In the end, however, there was even less honest competition in the sports than that which still keeps the Derby popular. By ancient custom no woman was permitted to see the games. Even if one crossed the river during the festival, she was killed by being hurled from the steep of Typaion by the southern bank.

But such things were forgotten long before A.D. 394 when by edict of the Emperor Thedosius I. the games were suppressed. The mighty masterpiece of the gold and ivory Zeus was destroyed in Constantinople. Then in the sixth century of the modern era a series of earthquakes destroyed most of the temples and a landslip from Mount Kronion buried the buildings at its southern foot. About a century later only the wrecked top of the temple of Zeus was visible. Inundations had buried the city in fifteen to twenty feet of silt, from which a few fine statues including a Hermes by Praxiteles have recently been discovered by German excavators, who uncovered the ruins at a cost of some £40,000 in the vain hope of winning from the ancient site a magnificent harvest of classic statuary.

THE WONDER CITIES. XXII

THE ROMANCE OF KONIA

By Sir William Ramsay, D.C.L., Litt.D.

THE ROMANCE OF KONIA

By Sir William Ramsay, D.C.L., Litt.D.

Late Professor of Humanity, Aberdeen University
Author of "The Cities of St. Paul," etc.

KONIA, the old Iconium of S. Paul's missionary travels, was one of the great capitals of the world under the early Turks, who in the fourteenth century had a proverb: "See all the world, but see Konia." The Turkish state of which it was the governing seat was known as "Rum" or "Roum," pronounced as Rome was by the Elizabethans, and by Shakespeare when he punned:

> Now is it Rome indeed, and room enough,
> When there is in it but one only man.
>
> —Julius Cæsar, Act. 1., Sc. 2.

By virtue of its name Roum was a continuation of the Roman Empire which had successive capitals—first at Rome itself, then at New Rome or Constantinople (where Phrygians, Isaurians Cappadocians, Armenians sat on the throne of Augustus and Constantine), and finally at Konia. All these Asiatic dynasties based their power on maintaining the law and organization and in particular the name of Rome, but they were steadily Orientalising the Empire.

In the Byzantine period the people called themselves Romans, not Hellenes, still less Greeks; but they spoke Greek. The first Turkish Empire was Roum, not "Turk"; but they spoke Turkish, and their outlook was to the East, especially towards Persia, and not to Europe and the West. Roum had

no western seaboard and no harbours, but was confined to the inner plateau of Asia Minor, for European merchants and adventurers, mercenaries and pirates, held the sea coasts and islands; the Grand Catalans carried their plundering raids far up to the east, the early Crusaders marched towards the Holy Land across Constantinople and Anatolia, the third Crusade captured Konia in 1175, the fourth captured and plundered Constantinople in 1204, and Genoese and Venetians built castles and fortresses all down the western and southern seaboards so that in the Turkish peasant speech of the present day Djinneviz (Genoese) is the name for old walls or old strongholds. Indeed, the destruction of the ancient civilisation in Asia Minor was due quite as much to those rude soldiers and traders of Europe as to the Turks; the latter were more peaceful than the former. When I find that mounds in which the ancient chiefs and kings of the land were buried, 50 or 100 or even 150 miles from the coast, have been opened and spoiled of their treasures, I attribute this to European robbers; for in the purely Turkish inner lands there are no signs of such pilfering.

Konia stands as representative of the first Turkish Empire in Anatolia or Asia Minor, lasting from 1071 until the Osmanli or Ottoman Turks made themselves supreme towards 1400. There are, or were, many other beautiful cities of the Turks, adorned with mosques, colleges, palaces and tombs, far too numerous to mention; but Konia was the greatest. The civil laws and customs of Roum were largely Roman and the trade continued on pre-Turkish lines; even after Konia ceased to be the Turkish capital the Ottoman Turks at Broussa, and afterwards at Constantinople, could not wholly escape the grip of the Roman tradition; but their art was learned from the East where Roman and Byzantine decorated architecture had been imitated and treated with the Oriental spirit under Moslem rule from 700 A.D. onwards.

So much for the historical setting; before passing to description it must be mentioned that the old Empire of Roum is also frequently called Konia, the name of the capital being applied to the whole country; and in the following account the term "Konia" sometimes refers to the state as a whole, and sometimes to the actual city. Throughout the Empire the monuments are

PANORAMA OF KONIA, THE ANCIENT ICONIUM OF S. PAUL, AS IT IS TO-DAY

CHURCH OF ONE OF THE EARLY FATHERS AT ICONIUM

An outstanding feature of ancient Iconium that has lasted till the present day is this building, originally an early Christian church under S. Amphilocius who was Bishop of Iconium from A.D. 371 till about 400. After the Seljuks conquered the land it became a mosque, and now, its religious significance lost, it serves merely as a clock-tower.

MOSQUE AND MINARET OF A GREAT CITY NOW FALLEN INTO DESOLATE RUIN

Nothing strikes the visitor to modern Konia so much as the atmosphere of crumbling ruin which permeates its every corner. That this is no gradual process resulting from the slow attrition of many centuries is well seen in this building known as the Mosque of the Indje Minaret. Our photograph shows it in its comparatively complete state prior to a lightning storm in 1901. Since then it has been but a ruin and its graceful minaret, shattered and broken, stands now only as high as the lower of its two galleries.

RUINS OF THE PALACE OF THE SELJUK SULTANS OF KONIA

Long ago when Konia was a great and busy city of Asia Minor, its principal buildings were the mosques and "Tekke" of the dervishes but dominating the city in size and beauty rose the finest building of all, the palace of the early sultans. Now all that remains of it is this gaunt but picturesque ruin of one of its towers. The building was used for government offices until 1800, but in 1850 new buildings were raised for this purpose and the doom of the old palace was sealed; soon, probably, all traces of it will have disappeared.

remarkably uniform in type and character, and there might equally well be introduced among the illustrations some which are taken from other cities of Roum besides Konia.

Konia, then, is one of the cities that claimed to be the oldest in the world. Its situation, strikingly like that of Damascus, made it a centre of life from the beginning of organised society. Both cities lie near the mountains on the western edge of a vast dry level plain which stretches away to inner Asia; both are abundantly watered by streams from those western mountains (though the Abana and Pharpar, rivers of Damascus, are far more famous and carry larger bodies of water); both are literally embowered in gardens beside the desert; but the plains east of Konia are far more fertile than the Syrian desert east of Damascus and its villages are more important. At each city early society gathered inevitably to enjoy the bounteous provision of nature, and each must endure throughout the history of mankind. Legend places the foundation of Konia before the Flood—indeed the tale of the Flood and the mourning people is the oldest in its history.

Hardly a trace remains in situ of pre-Turkish Konia; but much is concealed below the ground. In 1800, when Colonel Leake, the famous geographer, rode into Konia on his hurried mission from Constantinople to Egypt, he saw the walls two or three miles in circumference, strong and lofty, flanked with square towers which, at the gates, were built close together. They were the work of the early Turkish sultans of Roum who seem to have taken pains to exhibit the Greek inscriptions and the remains of architecture and sculpture belonging to the ancient Iconium. A great number of Greek altars, inscribed stones, columns, etc., were inserted into the fabric, which was still in tolerable preservation throughout the whole extent. One of those monuments was a relief representing a warrior, evidently of pre-Greek type. It was not seen by Leake, but Texier, who visited the town in about 1830, made a drawing of it. This is the sole known relic of the most ancient Iconium. No scrap earlier than the Greek Iconium is known to me, and nearly everything belongs to the Roman period. When I rode into Konia in 1882, the walls which Leake had seen in 1800 had almost entirely disappeared, but I did find, in the last remaining

piece of the wall, one inscription that was Christian of the early Byzantine time, probably as old as the fourth century A.D. The city had long been in a state of decay and the Turks, having no need of defences owing to their long immunity from war, used their own walls as a quarry for building-stones. The construction of the walls was therefore clearly seen; they consisted of a thick core of sun-dried mud bricks, with an outer coating of stones (almost all ancient and taken from buildings of the pre-Turkish period). Mud bricks form a useful and very cheap building material, but they must be sheltered from rains under which they quickly dissolve into their primitive constituents. But those stones from the wall are not all lost; they can be seen in houses, chiefly in the sub-structures, where mud bricks cannot be used, and in gardens. Whenever any digging is done in the city to-day for the foundations of a new house the old pre-Turkish stones are disclosed, and any resident who watches the process can discover them. In every garden that I have visited in the town many such stones are to be seen.

Most of the cities of the plateau suffer from lack of stone which is very rare on the great plains, while even the mountains often furnish little or no good building material. Hence the mud bricks must have been used from the earliest time. In the Greek and Roman period a more educated taste, accustomed to the use of stone on the coasts and islands and in Greece, demanded and imported marble and other stone for all public buildings, knowing it to be more lasting and more effective; but even then ordinary private houses were doubtless constructed mainly of mud bricks with wooden beams interwrought. If carefully protected, such houses will stand for a thousand years; but the modern courtyards and garden walls are hardly shielded from the rain, except that on the top of the walls is placed a course of poor and cheap stones, or a covering of straw or reeds.

Konia was rebuilt almost entirely by the first Turkish sultans, mostly during the twelfth century. The material was in great part taken from pre-Turkish buildings, but unfortunately those architects who were sufficiently skilled reworked the stones to suit the new fashion and the changed religion. The rude peasant who uses the old stones as he finds them is a true friend of

Photo from Sir W. M. Ramsay.

FAST DECAYING WALLS AND TOWERS OF A MOSQUE IN KONIA

The history of Paul's city of Iconium has indeed been eventful. When in 1097 Nicæa fell to the Crusaders, the city was chosen, probably on account of its central position in the wonderful Roman road system in Asia Minor, by the Seljuk sultans of the province of Roum. Although it has remains in the Greek type, dating to a remoter age, its Seljuk buildings are most interesting, reflecting as they do a much more Oriental influence; such is the mosque shown here (Laranda Jami Sahib Atta) still graceful in its decay.

INTRICATE TRACERY OF ANCIENT TURKISH ARTISTS

Konia has many remains of the ancient Turkish epoch, though these, as we have seen, are fast vanishing. How well the craftsmen of that ancient day worked, how skilfully the sculptors carved in stone is very evident from the involved and beautiful decoration of the entrance to the ruined Syrtchaly mosque shown here.

the historian, but technical training destroys the old to make the new.

Ala-ed-Din, Glory of the Faith, the Aladdin of the Arabian Nights, was the most famous of these early sultans of Roum. Aladdin in the story, by means of his wonderful lamp, built in a night the splendid palace of the sultan; he also built a palace for himself. They both in reality refer to the same palace—that which once adorned the hill that stands on the north-east side of the city of Konia. More than one of the Arabian Nights stories are connected with Asia Minor; one of the earliest and best has its scene on the road across the mountains from Tarsus (once a capital of the Moslem Arabs) to Tyana, the city of the strange sacred lake—a lake of cold water which is always boiling as Strabo describes it in his Geography, written in Greek when Christ was about twenty years of age. A story which is widely used and localised at various points in Asia Minor, about a city that was overwhelmed under a lake, was transferred to Tyana; and two other quaint scenes on the road, the castle of Black Marble and the lake with the marvellous fish, are mixed with Tyana and its lake. It was one of those strange fish that caused the death of the Khalif Almamoun, as he was returning by Tyana to Tarsus from a raid in the Christian land. The castle of Black Marble is still a wonderful sight, high on a peak of Taurus overhanging the road.

Konia remained an interesting and beautiful city down to the early nineteenth century. After the sultans of Roum had been swept away and the Ottoman sultans of Constantinople reigned over the land, the old institution of the "Mevlevi"—i.e., dancing—dervishes protected and in some degree ruled it. The hereditary head of the Mevlevi—styled Tchelebi Effendi—gave validity to each new sultan by girding on him the sword, the warlike emblem of that power on which the Sultanate rested. These Mevlevi dervishes were regarded with deep respect and, in general, the sultans left them and the rest of the great territorial aristocracy to do as they pleased, so long as tribute was paid and a quota of soldiers furnished in case of war. They were great local families who lived among their people, protected them and dispensed mild justice among them. They practised almost boundless hospitality and rarely, except under

compulsion, visited Constantinople, for a summons to the capital was feared as dangerous and often resulted in execution. The Tchelebis were very liberal in religion and absolutely free from bigotry; in fact, dervishes were generally regarded, in the centuries before 1830, as hardly orthodox Moslems. They drank wine and still drink it—in fact, often too freely. They learned Persian as a more educated tongue; they encouraged poetry and literature; but having little stimulus to progress they have now lost all eagerness and initiative. Their colour is not the Moslem green, but blue, which is regarded by Moslems as unlucky, and apt to put "the evil eye" on beholders. They could not become sultans, though occasionally, some local powerful family rebelled, but there was no other post superior to that which they occupied among their own people and friends. The only religious duty of the Tchelebis consisted in presiding at the dance every Friday at noon.

The mosques of Konia, and especially the great "Tekke" of the dervishes where the dances take place, were the chief ornaments of Konia after the palace of the early sultans. The palace, however, fell into decay. It was still used as a government house in 1800, but new offices in the centre of the city were built after 1850 and the destruction of the old palace was accelerated; it was a quarry for the population and the governing officials, and in 1882 only a small part of it remained. In 1886, when I revisited Konia, there was only one wall of a tower left standing, and this still stands merely because there is practically nothing visible in it worth removing.

In the now destroyed part of the palace which I saw in 1882 there was shown a little courtyard where a spring of water, now dried up and entirely covered over by soil, was said formerly to have existed; it was stated to have been called Plato's Spring. The old Greek philosopher Plato passed in tradition into Arabic and early Turkish literature under the name of Iflatun as a supremely powerful magician, just as Virgil, in the Middle Ages in Western Europe, was known to the people only as the most powerful of magicians. In modern nomenclature "Plato's Spring" still remains as the name of a remarkable spring rising from the ground near a great lake eighty miles west of Konia, over which was built in remote times a little

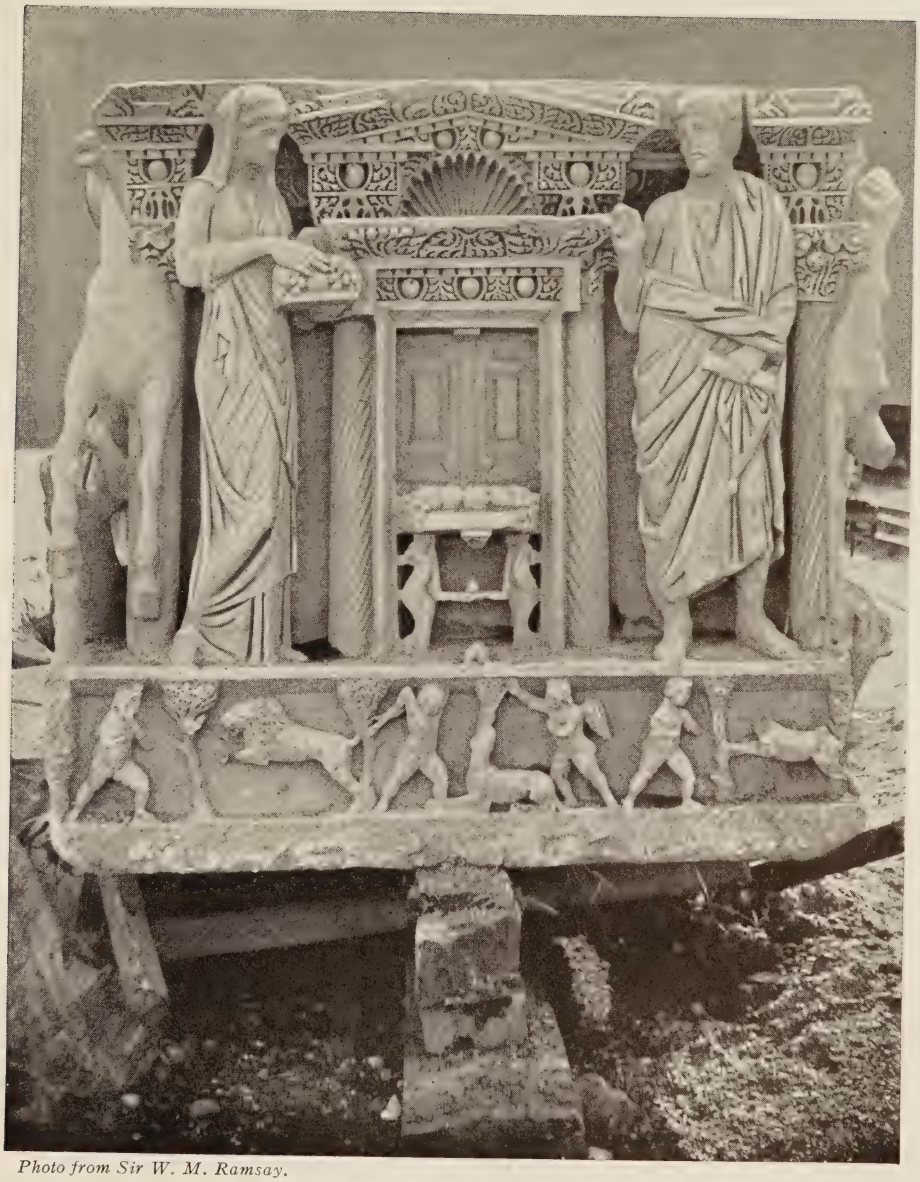


Photo from Sir W. M. Ramsay.

A RELIC OF PRE-TURKISH KONIA

Now in the Imperial Museum at Constantinople, this great sarcophagus, 12 feet long, is one of the rare relics of the civilisation and art of Konia before the city and province came under the sway of the Seljuks. The beautiful workmanship which fashioned its figures is more suggestive of Athens and the West than of the Orient whence it comes.

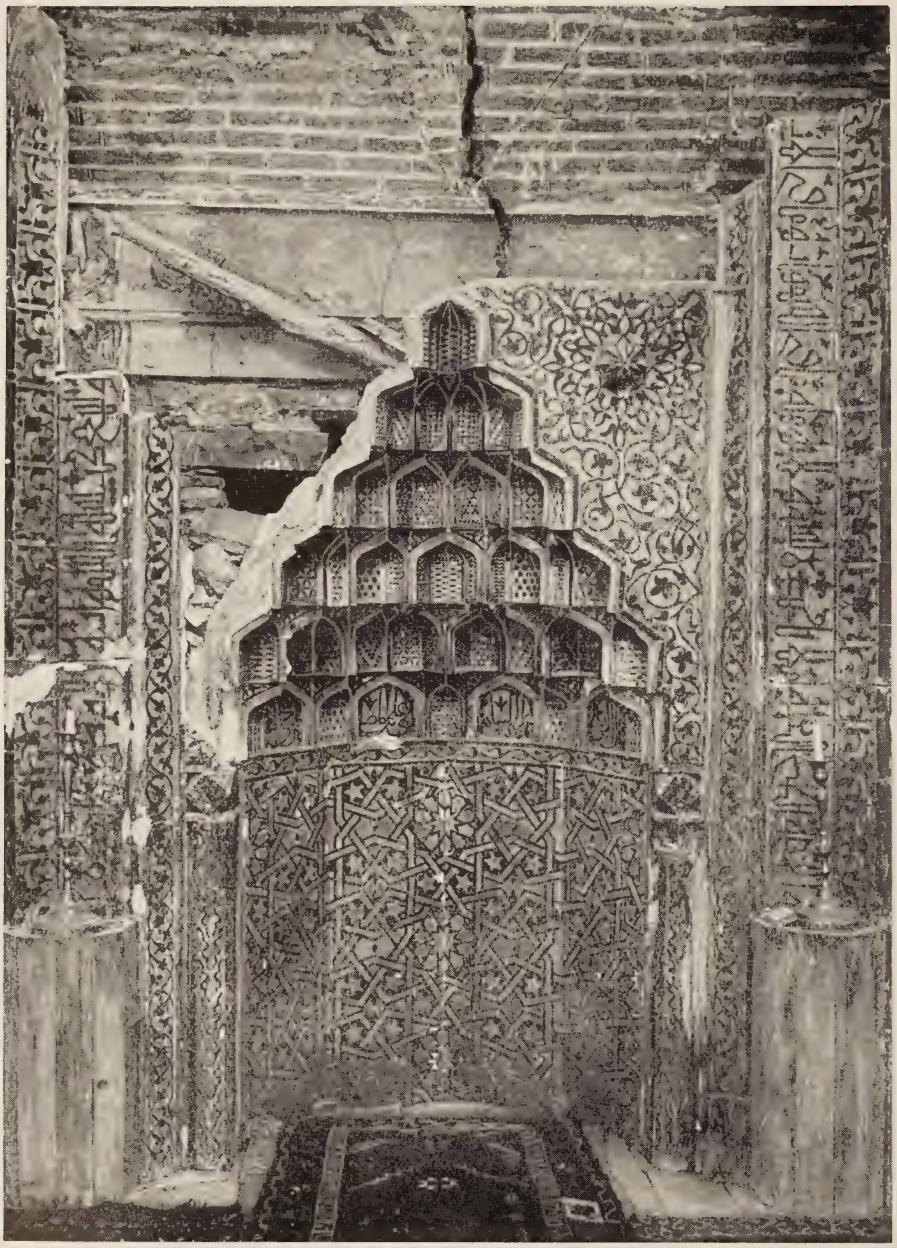


Photo from Sir W. M. Ramsay.

MAHOMEDAN STUCCO THAT STANDS NOT THE TEST OF TIME

In Konia there is found in the mosque known as Bey Hekim Jami this exquisitely designed "mihrab" or sacred niche let into the wall facing Mecca. The passage of time has dealt a heavy blow here, but one can still appreciate the skill that worked the gracefully twining plants and the starry decoration below. In the foreground is a beautiful prayer mat.

Photo from Sir W. M. Ramsay.

EARLY CHRISTIAN SYMBOLIC ART

Near Konia lies this overturned grace-stone of a bishop of the Christian church there in the third century. The fish is a primitive symbol of the divine Saviour and the opened tablets in the rounded pediment in the centre typify the account book from which the final reckoning will be established on the last great Day of Judgment.

Photo from Sir W. M. Ramsay.

HUNTSMEN AND HORSES IN MARBLE AT KONIA

Above is another photograph of the stone sarcophagus illustrated in a preceding page; here one of the sides is shown. The work is typical of a school in Konia which represents the last effort to revive the moribund Greek art immediately before its ultimate degradation and the triumph of Byzantine art under the early sultans. The series of larger figures represents a woodland hunting scene and below is a frieze also in high relief, of doubtful interpretation; every figure is imitated from a Greek original.

temple or chapel on whose one remaining outer wall of enormous stones there are sculptured representations of the supreme god and goddess and attendant divinities. This little temple was built at least a thousand years before Plato, but the spring near its walls was believed to have been produced by his magical power.

In Nikda, or Nigdeh, another city of Roum beside the ancient Tyana 100 miles east of Konia, there was a very beautiful tomb of a sultana which used to be famous as the most beautiful building in all Turkey. The pasha who resided at Nikda, when informed that we had been visiting this tomb, remarked: "It was formerly called the most beautiful building in Turkey, but we have now learned better taste." At Konia itself there are no beautiful tombs; the Moslem dead are buried with the minimum of ceremony and the maximum of despatch. Only the old Tchelebis remained in their great coffins shrouded with precious cloths, with images of their turbaned heads at the end, giving the whole something of that anthropoid appearance which was customary in ancient Egypt, as shown in illustrations facing pages 332 and 334 of this work. The employment of anthropoid sepulchral representations in stone or other material remained customary through the Byzantine period in Asia Minor right down to the present day.

Those old Tchelebis lie in state in part of the Dervish Tekke, a very beautiful building where in a great hall the dances take place on Friday and the five daily prayers are held. The Tekke therefore is both a great monument of the dead and the hallowed meeting-place of the dervishes for religious services. Attached to it are buildings where the dervishes live. The Tchelebis are the hereditary owners of large estates in several parts of the country. I have visited two such estates which are both called "Black Lion" (Kara-Arslan), and the very name carries us back to the most ancient known period of Anatolian society when the lion was the sacred embodiment of power and often represented on the tombs as the divine guardian of their sanctity.

The whole complex of buildings which constitute the Tekke forms the most remarkable and beautiful memorial of early Turkish history in Konia. In the city itself there are no very

old or beautiful colleges, but a number of fine ancient mosques merit the visitor's attention, each with its slender, graceful minaret from which the muezzin, at stated intervals, calls the faithful to prayers. It is especially on their outer doorways that the ornamentation in arabesque work is lavished.

The endowment for the support of those mosques and other religious or charitable foundations, e.g. the fountains, took the form laid down by the old Roman Law of burdens upon landed property. Such property could be bought and sold in proper legal form, but the burden passed from seller to the purchaser. Unfortunately for the maintenance of such foundations the value of the piastre fell seriously in more recent times and the endowment ceased to be adequate for their proper maintenance. The result was that almost all those old foundations fell into decay, and in about 1880-1882, when we first were travelling through Turkey, most of the mosques were in serious disrepair and sometimes even closed and deserted. It is to the credit of the late Sultan Abdul Hamid, that name of ill omen in history, that he set about the creation of a Department of State specially charged with the maintenance of all such foundations, and in consequence a good deal has been done, albeit with inadequate knowledge, to preserve such old monuments from further decay. The State thus stepped in to counteract the effect of the depreciation in the value of Turkish currency whereas in the Western Europe of to-day this depreciation is sometimes even deliberately practised by states in order to escape their obligations to their own people and to foreign powers. The Mevlevi dervish foundations were saved from the general depreciation by the fact that the dervish chiefs themselves were the hereditary owners of the estates and responsible for the maintenance of the institutions.

A proverb is still current in Konia: "He that visits Konia once will come seven times." I can bear witness to the truth of this adage, for the charm and wonder of the city are imperishable.

ANCIENT ARTS AND CRAFTS. XI

THE STORY OF THE FIRST SHIPS

By Donald A. Mackenzie

THE STORY OF THE FIRST SHIPS

By Donald A. Mackenzie

Author of "Egyptian Myth and Legend," etc.

THE invention of the boat in ancient times was as wonderful an achievement as the invention in our own day of the aeroplane. Early man in the course of his experiments—for he must have conducted experiments—had to devote to his self-imposed task much thought and energy, and had perforce to face with patient determination many disappointments and, no doubt, the ridicule of his fellows as well, before he acquired the requisite knowledge of the arbitrary shape and proportions which give a boat perfect balance in the water.

It must have been sheer necessity which prompted the ancient inventor to solve the problem of boat construction and so advance the cause of human progress. Rivers had to be crossed, and it is unlikely that these were ventured upon merely for recreation and amusement. Indeed, in those countries which in ancient times were haunted by numerous crocodiles and hippopotami, the crossing of rivers must ever have been attended by grave risks to human life.

The swimming habit appears to have been acquired at an early period in human history. No doubt floats of various kinds were in constant use. At any rate, floats in the form of inflated skins still found favour in Mesopotamia long after boats had been invented. An Assyrian sculptured scene of special interest shows a number of soldiers swimming across the River Euphrates supported by skin bladders. Some Asiatic peoples continue to utilise similar contrivances for crossing rivers. Round basket-like floats called "kufas" mark another stage in early man's efforts to cross a river in safety and with comfort. These

were favoured by the ancient Babylonians and are still popular "ferry boats" on the Tigris and Euphrates. The kufa was unknown in ancient Egypt; but the Egyptians, like the Babylonians, made use of rafts which were sometimes fitted with skin floats to increase their buoyancy. The river-boat and the sea-going ship were not, however, developed from skin float or kufa, or from the raft. It was an independent invention which superseded earlier contrivances impossible of further development, just as the aeroplane has in our own day superseded the old-fashioned pear-shaped gas balloon to which it really owes nothing.

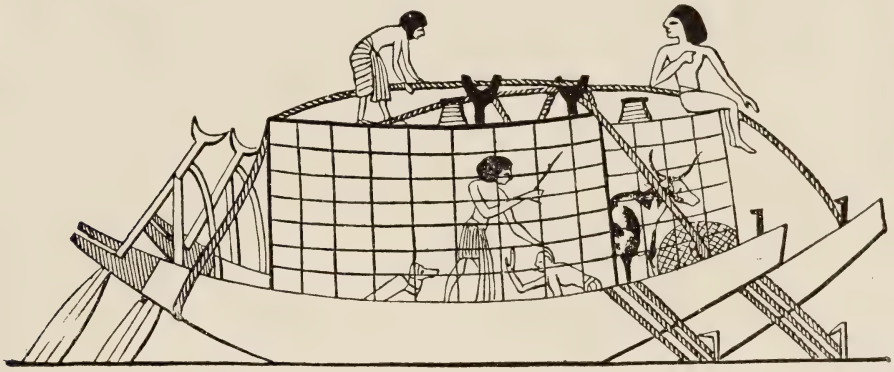
Certain writers have assumed that the earliest boat was made from the trunk of a tree, and it has been suggested that when trees were seen drifting down swollen rivers the idea occurred to some ancient thoughtful observer that if he hollowed one, he could sit in it and paddle down or across a river at his ease. But it is highly improbable that early man ever saw a boat in an upright or fallen tree. If he chanced to step on a tree which had drifted down a river, he would find that it has a tendency to roll round and immerse an adventurer. It is unlikely, too, that the first boat-builder undertook the laborious task of attempting to shape and hollow the trunk of a tree so as to discover how it could be made to maintain an upright position in the water after his weight had been placed upon it. It seems clear, therefore, that man never imagined a wooden boat of the "dug-out" order until one of a lighter material had first been invented.

Such sea terms as the "skin of a boat" and the "seams of a boat" suggest that before boats were shaped from wood they were made of skins which were sewn together. But there were even earlier boats than skin boats and it is possible for us to study them in surviving pictures and models so as to ascertain how the first real boat came into existence. Those early boats suggest an ingenious combination of a fish and a bird. The fore part has fish-like lines; the stern resembles the overhanging hind parts of a swimming sea bird. Evidently the inventor had gone to nature for suggestions and guidance. The duck's feet suggested paddles as ultimately the fish's tail did the position and use of the double or single steering oar.

Right: From Wilkinson's "The Ancient Egyptians."

ANCIENT EGYPTIAN BOAT-BUILDERS LED THE WORLD

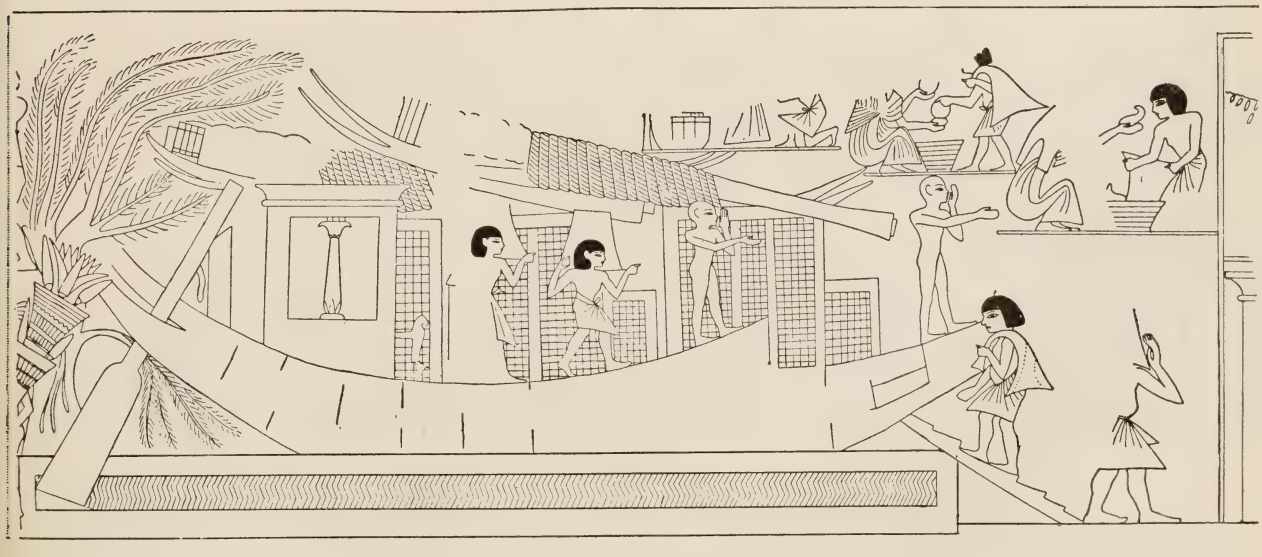
The first boats were not hollowed out tree trunks. After first relying on simple papyrus reed floats the ancient Egyptians discovered a means of binding their reed bundles together into a graceful boat-like shape, as the left-hand illustration from a tomb of the pyramid age will show; hence the Egyptian name for a boat—the "Binding." The right-hand illustration from the Theban tomb of Khem, a Thinite noble, shows a dug-out being hollowed on lines already determined by the "Binding."



From Wilkinson's "The Ancient Egyptians."

EGYPTIAN LIGHTERS HAD CABINS BOUND ON WITH ROPE

An illustration from the tomb of a noble at Thebes shows that the cabins on the Nile-going vessels of Egypt were frequently very large and, if intended for cattle freightage, built of open lattice work. We see two boats moored to the bank; in the farther one is a cow with a bale of some kind, in the nearer a dog and a slave being chastised for negligence.



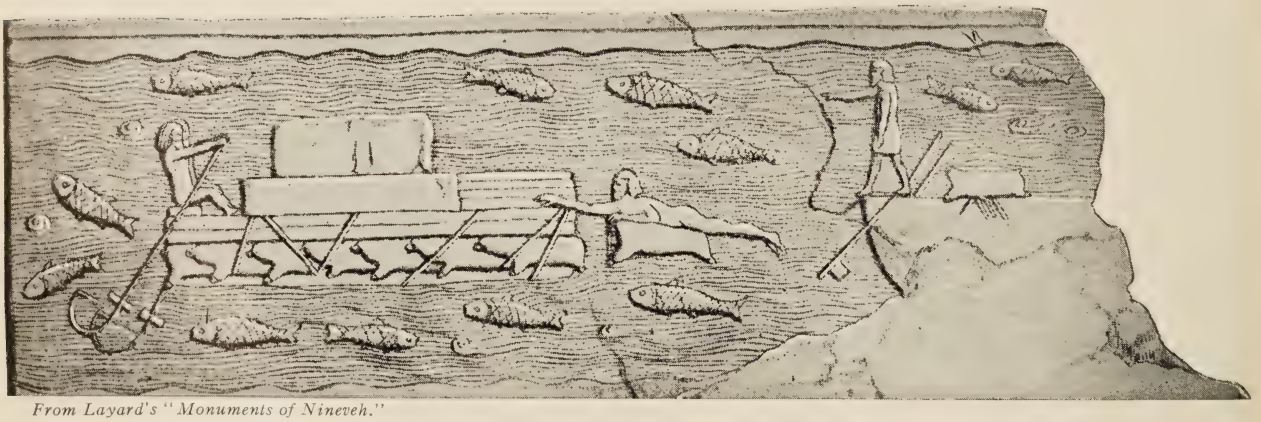
ROOMY SAILING VESSELS IN WHICH EGYPTIAN NOBLES VOYAGED ON THE NILE

The tomb of Apui at Deir el-Medinet gives us a homely glimpse of Egyptian life. As in the illustration above on this page two boats are moored to the bank of the Nile, but these are large sailing vessels and intended for personal use to judge by their sumptuous appointments. Now masts are unstepped and sails furled and by means of a gang plank sailors pass to and fro to bargain for supplies with neighbouring villagers.

Photo by the Egypt Exploration Society.

SHIPS THAT BROUGHT TO EGYPT APES AND IVORY, SPICE AND INCENSE

Though the Nile was Egypt's grand waterway, her sailors did not shrink from braving the outer seas. In the temple of Queen Hatshepsut at Deir el-Bahri are found low reliefs of the five mighty ships she sent by way of the Red Sea to Punt in the south, to fetch back all manner of treasures for the glory of Ammon. That they are ocean-going vessels may be seen from the nature of the fish depicted, squid and crayfish among them. Note the thick rope that spans the ship from stem to stern.



From Layard's "Monuments of Nineveh."

MOST PRIMITIVE OF CRAFT BUT NEVER OBSOLETE

Substantial rafts lashed and buoyed beneath with inflated skins of animals were used as well as kufas on the Tigris for transporting materials; but from the raft no more than from the kufa were ships derived. The raft in this illustration, of a type known as "kelek," is propelled with the same strange long sweeps as the kufa above, and behind it a man is swimming with the aid of a skin; on the right a man is apparently giving some directions from the stern of an ordinary boat.

The earliest boats, worthy of the name, were those that plied on the River Nile. Pliny, writing in the first century of our era, informs us of the tradition prevalent in his time that ships were first invented in Egypt and were made from papyrus (Book vii., chap. 56). The more abundant evidence now available tends to confirm that view. Every stage in boat-building is represented in the wonderful tombs of the country of the Pharaohs. In addition to pictures, sculptured representations and models of a great variety of vessels, there are inscribed texts which throw light on the origin and growth of boat building in ancient Egypt, which, be it remembered, is a treeless country.

At an early period the "reed float" was used on the Nile; it is still as much favoured by peasants in Middle and Upper Egypt as it was by their ancestors sixty centuries ago. From this primitive float the modern sea-going vessel was gradually evolved. The most ancient literary references to reed floats are found in the Pyramid Texts, which date back to about 2700 B.C. It had been imagined by the early Nilotic peoples long before that date that the sun was drifted daily across the sky on the Celestial Nile. The solar deity named Ra (or Re) was ultimately given a boat, but, to begin with, he was supposed to use two reed floats which are referred to in the texts as "the two floats of the sky." Those floats were two fish-shaped bundles of reeds (bulrushes) lashed together with the twisted fibre of papyri.

The earliest name of a boat in Egypt was the "Binding." Breasted tells that he was once taken across the Nile in Nubia by a native who had carried down to the shore two floats made of dried reeds and bound together. "It was," Breasted writes, "not a little interesting to find a craft which he knew only in the Pyramid Texts of 5000 years ago still surviving and in daily use on the ancient river in far off Nubia." ("Religion and Thought," p. 108.)

Broader floats made up of more than two bundles of reeds came into use and are mentioned in the Pyramid Texts and can still be seen in Middle and Upper Egypt. Then an ingenious inventor introduced the first real boat. It, too, was called the "Binding," and in a tomb picture three ancient Egyptian work-

ers are seen binding together the reeds which have been given a rather graceful canoe shape. It was probably in such a vessel that the child Moses was laid by his mother. "She took for him an ark of bulrushes," the Old Testament narrative relates, "and daubed it with slime and with pitch, and put the child therein." (Exodus ii., 3.)

The next stage in the progress of navigation is marked by the introduction of the sail which was, no doubt, suggested by the bird's wings. At any rate, the sail emphasises that we are really dealing with a deliberate invention. A vessel with a square sail is shown on a predynastic amphora from Upper Egypt which is preserved in the British Museum and is of much greater antiquity than the Pyramid Texts which from religious motives conserved the early idea of "the floats of the sky."

The wooden ship does not appear in ancient Egypt until after its Pharaohs had begun to obtain supplies of timber. At first they imported cedar from Lebanon, and later (about 1000 B.C.), as is proved by the sawdust in mummy packings, cedar from Morocco. The Mediterranean was crossed by enterprising mariners in boats of papyrus reeds coated with pitch. No doubt the sails were made of strong linen. At any rate this was the sailcloth ultimately used, for Ezekiel (xxvii., 7), referring to the imports of Tyre, mentions that "fine linen with broidered work from Egypt was that which thou spreadest forth to be thy sail." The earliest prospectors must have followed the coast line when they began to search for timber, but ultimately they ventured to shorten their voyages by crossing the sea like the migrating birds. Indeed, there is evidence which suggests that they followed migrating birds. It was the Phœnicians who first navigated by observing the stars. That was why the Greeks knew the North Star as "the Phœnician."

The timber procured from Lebanon was drifted to Egypt and was used chiefly for making coffins, furniture, statues, etc. Then the earliest Egyptian "dug-outs" were constructed. Having solved the problem of boat construction by making experiments with vessels of reeds and, probably, partly of skins, the boat-builders were able to shape and hollow the trunks of trees, imitating the lines of the older and frailer vessels. The tomb scenes of the Old Kingdom period afford us glimpses of the busy

By permission of the Trustees of the British Museum.

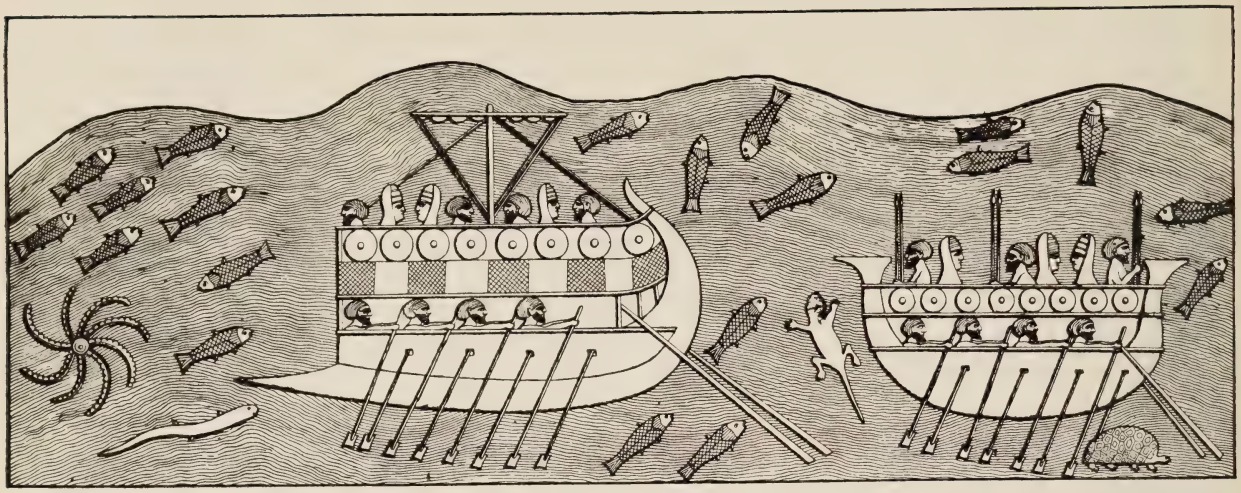
METHODS THAT HAVE NOT CHANGED FOR NIGH THREE THOUSAND YEARS

Primitive craft in Egypt were reed floats which, as we have seen, developed naturally into the earliest boats; a glance at similar primitive conditions on the Tigris and Euphrates will readily show that it is not to Mesopotamia that we must look for the invention of the boat in our sense. Indeed, the skin-covered, basket-like "kufa" has given rise to no developments and is still favoured as a ferry in all its primitive simplicity. This relief, from Sennacherib's palace at Kouyunjik, shows besides the kufa a fisherman buoyed on an inflated skin and catching his quarry with enviable ease in view of the thickness of his line.

By permission of the Trustees of the British Museum.

SUCH A SHIP AS HIRAM, KING OF TYRE, MIGHT HAVE SAILED IN

Our best representations of the famous Tyrian galleys that cruised from end to end of the Mediterranean are found on the wall sculptures of the Assyrian kings. Here we see a beaked warship with two banks of rowers, nine and eight, of which only the upper is visible; on the shield-hung deck above them are groups of warriors. The ship is on the sea, not a river, as the detailed circumstance of the Assyrian artist clearly shows; witness the lusty crab that has just assured itself of a meal.



From Layard's "Monuments of Nineveh."

PANIC STRICKEN, ASSYRIA'S FOES TAKE TO THE SEA

This illustration, taken from a relief at Kouyunjik, shows two types of ship, not Assyrian but belonging to Assyria's enemies—in this case Phœnicians, there is good reason to believe. Defeated, they have taken refuge on board and put out into what must be an estuary to judge by the fauna—starfish, eel, turtle and a kind of alligator. One ship is single-masted and furnished with beaked prow and incurving stern; the other mastless with prow and stern alike; both are rowed by two banks of oars.

ROMAN GALLEYS CARVED BY AN ARTIST TO WHOM THEY WERE FAMILIAR

On Trajan's Column in Rome is a good representation of a beaked Roman galley, though necessarily out of proportion with the figures standing behind it owing to the nature of the composition. It is obviously derived from the Greek warship, which in its turn comes through Phœnicia from Egypt; or perhaps the connexion with Phœnicia was more direct, by way of Carthage. In either case, Egypt is the ultimate source of Rome's shipping and through Rome of the shipping of to-day.

shipyards in which the skilled workers are engaged constructing dug-outs in imitation of the "Binding." In the most elaborate vessels of later times the early method of tying up the curving bundle of reeds at the stern is perpetuated by the characteristic ornament terminating in a great carved lotus bud. The ship was in itself regarded as a living creature—a form of the mother-goddess—and eyes were painted on the bows, while its sails were dedicated to Nut, the winged goddess.

Boats were built on the Nile before copper implements came into general use. Settlements of colonists had been effected in Crete while yet flint and obsidian (natural glass) were being utilised. That artisans can do quite effective work on wood with polished stone adzes is proved by the evidence of Polynesia, and that the accomplished craftsmen of ancient Egypt displayed similar skill with such implements there can be little doubt.

The mariners of the Pharaoh not only sailed on the Nile and across the Mediterranean but ventured on the Red Sea. During the early dynasties ebony was obtained from Punt (Somaliland and southern Arabia) for furniture and for religious purposes.

The Red Sea was reached by the Hammamat desert route, a journey of five days from the Nile, and boats were constructed on its shores which had long been frequented by searchers for gold and shells—numerous Red Sea shells have been found in early Egyptian graves. Before 2900 B.C. the third dynasty Pharaohs had so developed shipbuilding and the science of navigation that Pharaoh Sneferu was able to send to the North Syrian coast a fleet of forty vessels to obtain cedar from Lebanon. An idea of the size of those seagoing vessels is obtained from the mortuary cedar boat of one of the Middle Kingdom Pharaohs which is 30 feet long, 8 feet wide and 4 feet deep.

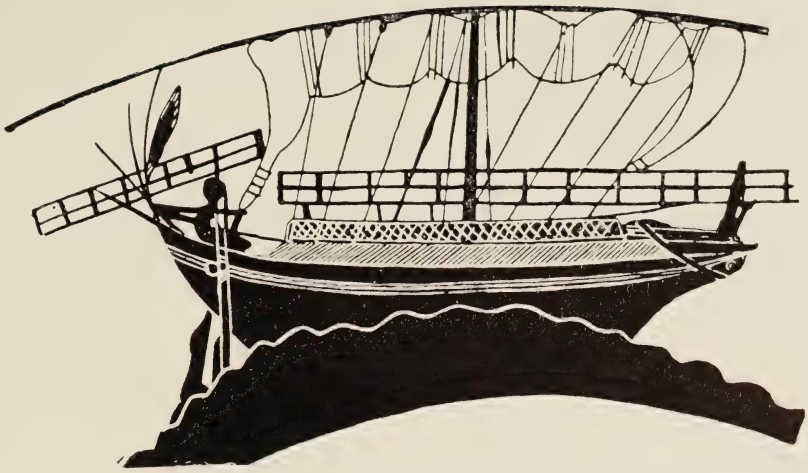
When we come to the Empire period of Tutankhamen, it is found that the Egyptians had brought the craft of shipbuilding to a high pitch of perfection. Queen Hatshepsut, who reigned more than half a century before Tutankhamen, despatched an expedition of five great vessels to Punt which is referred to in the inscriptions as "the glorious region of God's Land." There the vessels were loaded with "all goodly fragrant woods of God's Land, heaps of myrrh-resin, of fresh myrrh

trees, with ebony and pure ivory, with green gold (electrum) of Emu, with cinnamon-wood, with incense, eye-cosmetic, with baboons, monkeys, dogs, with skins of the southern panther, with natives and their children." (Breasted's translation.)

Mr. Keble Chatterton has drawn attention to an interesting feature of Queen Hatshepsut's ships. Above the deck, and stretching almost from stem to stern, is a strong truss of rope as thick as a man's waist. Commander T. M. Barber of the United States Navy has calculated that this truss could withstand a strain of 300 tons. It was intended to prevent what naval architects call "hogging." When a long vessel is "pivoted on the crest of a wave, the bow and stern, not being water borne, have a tendency to droop, while the centre of the ship tends to bulge up." A vessel whose centre bulges like a hog's back is in danger of snapping amidships under the strain. The Egyptian shipbuilders had, as they increased the length of the vessels, to deal with this problem, no doubt as a result of tragic experiences, and by Hatshepsut's time they did so successfully as the clinker-built ships sculptured in her Deir el-Bahri temple show plainly.

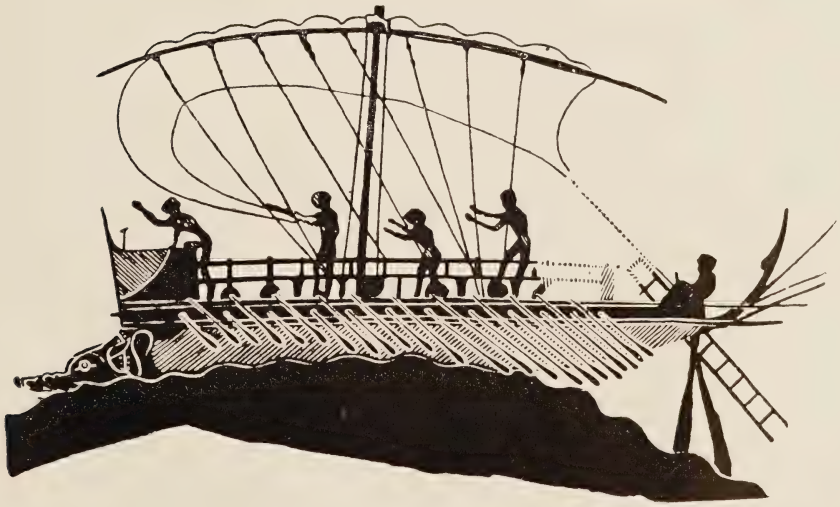
The progress achieved by the ancient Egyptians in the science of navigation can be followed by studying the vessels of various periods. Before 3000 B.C. the Nile vessels had two-limbed masts and three-limbed masts which had small high cross-pieces and were erected well forward. A treble mast is represented in a sixth dynasty tomb at Gebel Abu-Faida. The early sails are narrow and deep, but those of the fifth dynasty are wide and shallow. The smaller and earlier boats have a single steering oar or paddle directly over the stern, the later ones have two or more steering oars on each quarter. Those experts who have followed the Egyptians in their gradual endeavours to make their ships come up closer to the wind are not agreed as to the period when they discovered how to "tack." It was no doubt, however, on the Nile, with its winds blowing with the regularity of trade winds, that the arts of sailing against the stream and ultimately against the wind were developed as a result of experience covering many centuries.

A vivid and arresting glimpse of ancient Egyptian sailor life is obtained from the papyrus story of "The Shipwrecked Sailor"



TRADING SHIP PORTRAYED BY A GREEK VASE PAINTER

Another vase painting shows us a merchant vessel running close-reefed in a gale. The main differences from the warship above are the absence of a beak, not necessary for the peaceful prosecution of trade, and of oars—merchant ships had no need to manœuvre swiftly and could afford to court a favouring wind.



GREEK WARSHIP DEFTLY PAINTED ON A VASE

The next stage in the story of boat-building comes when the Phœnicians passed their science on to Greece; the Greeks soon mastered their masters and Greek vessels plied from the Pillars of Hercules to the Black Sea. Here we have a vase painting (c. 500 B.C.) of a warship with beak for ramming and a boarding ladder at the stern.

which appears to be as old as the twelfth dynasty, that is about 1500 years before the age of Tutankhamen. The sailor tells that the ship on which he sailed was 150 cubits long and 40 cubits wide, and had a crew of 150. It was bound for a distant Mine Land. The sailors were brave; "they had the hearts of lions" and some of them, the narrator tells, had ventured the opinion that the wind would be favourable, or that there would be no wind at all. But suddenly a squall arose and struck the ship, raising waves eight cubits in height. Apparently the vessel "hogged" and foundered. The shipwrecked sailor clutched a piece of timber and was washed ashore on an island, but all his companions perished.

The seafaring expeditions of the Egyptian mariners on the Mediterranean and the Red Sea coasts brought them into touch with a great variety of people who acquired knowledge of their arts and crafts. Egyptian barley was imported into Europe and Syria, and with the barley went the elements of the complex civilisation of the Nile valley which was based on the agricultural mode of life. Crete became a great seafaring state; the Phœnicians of Tyre and Sidon adopted, as did the Cretans, the vessels invented by the Egyptians, and became the first regular sea traders not only on the Mediterranean but in the Indian Ocean. The Egyptians, as we have seen, were not sea traders in the ordinary sense; they fitted out expeditions to obtain for themselves supplies of wood and of incense, precious metals, etc., used for religious purposes. The Phœnicians, on the other hand, became the carriers of the goods of various peoples and such daring and enterprising prospectors and explorers that they ultimately, as Herodotus informs us, circumnavigated Africa, setting out from the Red Sea and returning through the Strait of Gibraltar. But their successful achievement as mariners dates from the time when they adopted the Egyptian type of vessel which they developed and improved upon. "In every age and every district of the ancient world," writes Cecil Torr in his "Ancient Ships," "the method of rigging ships was substantially the same, and this method is first depicted by the Egyptians." The Phœnician ships were built on Egyptian lines, and they were imitated far and wide. Greek and Roman vessels were of the Egypto-Phœnician types.

When King Solomon had a navy built at a Red Sea port, he obtained the services of Phœnician mariners. His ally, King Hiram of Tyre, "sent in the navy his servants, shipmen who had knowledge of the sea, with the servants of Solomon. And they came to Ophir, and fetched from thence gold, four hundred and twenty talents, and brought it to king Solomon." (1 Kings ix., 27-28.) In addition to gold the mariners also brought from Ophir (a market town in south-eastern Arabia) "algum trees and precious stones." King Solomon's ships accomplished long voyages, for the "king's ships went to Tarshish with the servants of Huram: every three years once came the ships of Tarshish bringing gold, and silver, ivory, and apes, and peacocks." (2 Chronicles ix., 21.) Tarshish is believed to have been situated in the Malay Peninsula. It is obvious that long before Solomon and Jehoshaphat engaged in sea trafficking the routes had been explored by the Phœnician mariners, and that the market of Ophir received its supplies from several far distant sources of wealth which had been located by prospectors.

At an early period the mineral wealth of southern Spain was exploited by mariners and colonists from the Syrian coast. Louis Siret, the Belgian archæologist, has discovered traces of Easterners near old mine workings in Spain and Portugal who were apparently in touch with Mesopotamia and Egypt. His finds include an ancient Egyptian gold coronet, articles made from Egyptian ivory, ostrich eggs from Africa, figurines of the mother-goddess of Mesopotamia, alabaster perfume flasks, amber, perhaps from the Baltic, and jet, apparently from Whitby in Yorkshire. M. Siret dates this Eastern "culture wave" as far back as 2500 B.C.

That the Mediterranean seafarers reached Britain at an early date is suggested not only by the discovery of imported jet in southern Spain, but also by the older and equally significant discovery at Glasgow of an ancient boat with a plug of cork. As Lyell, the geologist, pointed out many years ago, this boat "could only have come from the latitudes of Spain, southern France or Italy."

Professor Elliot Smith in his "Ancient Mariners," draws attention to the Egyptian character of a boat carved on a rock in Sweden with that "hook-like appendage at the stem" which

"is found in ancient Egyptian and Mediterranean ships." Not only the "hook," but the bow "eyes," which are a distinctive feature of ancient Egyptian ships, are found on vessels such as Chinese junks.

Keble Chatterton, comparing the Chinese junk with the ancient Egyptian ship, says: "There is such a close similarity as to show a common influence and a remarkable persistence of type." The resemblance between the vessels of the Polynesians and those of the Mediterranean in ancient times was noted a century ago by William Ellis, the missionary, who wrote of "the almost classical shape of the large Tahitian canoes, the elevated prow and stern," etc.

It was not only the warships, the cargo ships and the small reed boats of Egypt that were adopted by various people in ancient times. Like Elliot Smith, Breasted has drawn attention ("The Journal of Egyptian Archæology," vol. iv) to the existence of the Egyptian type of double reed float, "the ancestor of the 'catamaran,' so common in Pacific and Malay waters," which is "still used by fishermen on the west coast of South America." Breasted adds: "It is quite evident that Egyptian navigation by way of the Red Sea affected navigation devices in the East Indian world just as it did in the Mediterranean."

The acquired knowledge of boat construction appears to have been handed down in traditional religious formulæ. In Polynesia, for instance, ceremonies conducted by priests were performed when trees were cut down and canoes were fashioned and launched. The "prayers and incantations" preserved the religious character of boat-building and also apparently the necessary measurements, etc. Before ever a tree was felled the canoe gods were, as Dr. Emerson has recorded, invoked to

> Grant a canoe which shall be swift as a fish
> To sail in stormy seas.

The influence and ideas of the ancient Egyptian ship-builders were carried to distant parts never reached by the Egyptians themselves.

THE WONDER CITIES. XXIII

TROY: THE CITY SUNG BY HOMER

By A. H. Smith, M.A., F.S.A.

TROY: THE CITY SUNG BY HOMER

By A. H. Smith, M.A., F.S.A.

Keeper of Greek and Roman Antiquities, British Museum

THE name of Troy suggests two different subjects of inquiry and study to a modern ear. The one is an archæological question: what is the relationship of the prehistoric city excavated by Schliemann to the other sites of prehistoric culture now known to us, such as Cnossus, Mycenæ and so on? The other is a literary problem for study with a "Homer" and a map: how far may the incidents sung by Homer be placed in an actual local setting, accurately known and intimately familiar to the mind of the poet? In the first three-quarters of the last century the distinction would have had no meaning, for the archæological evidence was non-existent and only the surface topography was a subject for study. To the present generation the two problems are distinct, for the one is concerned with actual facts revealed by the spade, and the other with the mind and meaning of the poet and the unchanged natural features of the country.

It is important at the outset to distinguish carefully the various senses in which the name Troy has been and may be employed. In the first place it stands for the city, built by Poseidon for Laomedon, which was ruled by Priam, besieged by Agamemnon and taken by the Greek host. The episodes of a few days of the ten years' siege are the subject of Homer's "Iliad." Of Troy, as of Arthur's Camelot, it may be said:

> The city is built
> To music, therefore never built at all.
> And therefore built for ever.

To some of those brought up as dwellers in this visionary city, the prosaic work of the spade is by no means accounted a gain and they are ready to lament, with the late Andrew Lang, that

> The sacred keep of Ilion is rent
> By shaft and pit; foiled waters wander slow
> Through plains where Simois and Scamander went
> To war with gods and heroes long ago.

In the second place there is a series of early settlements discovered by Henry Schliemann on a mound called Hissarlik. Thirdly, there is the Greek and Roman town of Ilion; and fourthly, there are the various points at which critics ancient and modern with their Homer in their hand have sought to place the town as most nearly fulfilling the conditions laid down in the wonderful epic.

The present paper deals principally with Troy in the second of the above meanings, but before we turn to the story of Schliemann's discoveries something must be said about the third and fourth, and about the processes by which Hissarlik was arrived at as what must now be called the true site of Troy. From an early period in Greek history proper Ilion or New Ilion claimed to be the direct successor of Priam's Troy. The claim was admitted by a series of eminent tourists. The first of whom we hear was the Persian king Xerxes who, on the march to the Hellespont in 480 B.C., crossed the Trojan plain. On the way he went up to the Citadel of Priam, Herodotus tells us. After he had viewed it and had inquired about every detail he sacrificed a thousand oxen to Athene of Ilion and his Persian Magi poured out libations to the ancient heroes.

A hundred and fifty years later Alexander the Great visited the Troad, sacrificed to Athene and did everything incumbent on one who claimed to be descended from Achilles. He ran naked up the tumulus of his mighty ancestor, as the custom was, anointed the sepulchral stone at the top and crowned it with a wreath, while Hephaistion placed a wreath on the tomb of Patroklos. He also offered a sacrifice to Priam on the altar of Zeus Herkeios, deprecating his wrath with the race of Neoptolemos, son of Achilles. He exchanged his own armour for

From Dörpfeld's "Troja und Ilion."

THREE SUCCESSIVE WALLS OF ILION ON THE SOUTH

On the south side the town walls of three periods may be traced. In the upper photograph at A may be seen the town wall of the second city, notable for the remains of burnt wooden joists found in connexion with it. Behind it at B is a slighter wall of the first period, while at C is the "megaron." In the lower photograph is seen the sixth period wall (C) with the bastions and walls (A and B) of a sixth period building. D and E are house walls of the seventh settlement.

From Dörpfeld's "Troja und Ilion."

ROME AND PREHISTORY CHEEK BY JOWL IN TROY

The great tower and gate on the southern side of the sixth city were badly obscured by the buildings of the ninth, or Roman, period. Here, however, the walls of the projecting tower are visible at O and G. A marks the city wall and the original entrance to the tower. Across one corner of the tower runs the wall of a Roman building marked H; while at I is a wall of the so-called Roman Theatre, more likely the Bouleuterion or Senate-house. N and M mark detached stones of the sixth period.

weapons reputed to date from the Trojan war. While he was being taken round the sights of the town, he expressed his poor opinion of the Lyre of Paris, and said it was the Lyre to which Achilles had sung the exploits of good men that he most wished to see.

The claims of the city were similarly recognised by Lysimachos, Augustus and Caracalla. The last-named was enabled by the death of his favourite Festus, which was thought by contemporary rumour to be suspiciously opportune, to repeat the funeral rites that Achilles had performed over the body of Patroklos.

It is therefore evident that through the centuries the town of Ilion was officially recognised as the successor of Homer's Troy and that its inhabitants carefully cultivated the legend. But there is also evidence that those who were critically minded doubted the truth of the tradition. It was the general belief that Troy was left utterly desolate after its capture, and the geographer Strabo definitely states that Homeric students questioned the truth of the claim which was prompted by the vanity of the inhabitants of the existing city. He thought that the true site was a place some three and a half miles nearer the mountains, a place called in his day the Village of the Trojans, and states that according to his authorities the town had had several changes of position and had finally reached its then situation about the time of Crœsus, 550 B.C.

The site of this Greek Ilion and Roman Ilium has long been known from inscriptions and otherwise as being at or near the Mound of Hissarlik (Turkish: Hissar, a castle; Hissarlik, a castle and its belongings). This is a low-lying hill projecting into the Trojan plain between two and three miles from the seashore and in the middle between the two chief streams which cross the plain, and which must be the Simœis and Skamander. But Strabo's scepticism seemed to justify the modern uncertainty as to the true site. In 1791 a French traveller, Lechevalier, put forward an alternative theory which held the field for nearly a hundred years. When Homer (Iliad, Bk. xxii.) describes how Achilles pursued Hektor round the walls of Troy, he says that they came to two fair-flowing springs where the two founts of Skamander rush upwards—one hot and covered with

steam, the other as cold as ice even in summer. Lechevalier called attention to an attractive group of springs which issue from the ground not far from the rocky citadel-like hill over the village of Bunarbashi (Spring head), and he decided that this must be the Homeric Troy, and for more than two generations the majority of scholars followed him. Unfortunately, the thermometer fails to confirm Lechevalier's belief that one of the springs is hotter than the other. It was however at Bunarbashi that Dr. Henry Schliemann, under the influence of Lechevalier's theory, first tried the test of the spade. It was only when he found no trace of the expected occupation at Bunarbashi that he transferred his operations to the mound of Hissarlik. Here he carried on a series of campaigns between the years 1870 and 1890. After his death (December 26, 1890) further excavations, according to advanced modern methods, were carried out by Schliemann's widow and Dr. William Dörpfeld. The final publication of the excavations is contained in Dörpfeld's "Troja und Ilion," 1902. English readers will find an interesting discussion of the whole problem in Dr. Walter Leaf's "Troy—a Study in Homeric Geography," 1912.

The mound of Hissarlik is of slight elevation; it rises some 90 feet above the adjacent plain and about 120 feet above the sea level. It measures approximately 200 by 250 yards.

The excavations, as finally interpreted by Dr. Dörpfeld, shows a series of nine superimposed layers of settlement (some of them can hardly be called cities) extending over a very long period of time. Three of these are of outstanding importance, namely the second, sixth and ninth. The first settlement is dated conjecturally between 3000 and 2500 B.C. and is only represented by a few foundations of parallel walls resting on the living rock. These consist of rough stones loosely piled in horizontal courses and cemented with mud. After the destruction of the first settlement a longish interval seems to have succeeded which is represented by an earthy layer over the site.

The second settlement is the prehistoric city assigned to the period between 2500 and 2000 B.C. Its surface level is some 16 feet above the living rock, and it is banked up by powerful retaining walls which enclose a limited area of about 100 yards by 150. The second city is that which was regarded by Schlie-

From Dörpfeld's "Troja und Ilion."

WHERE WARRIORS DWELT LONG ERE HOMER SANG

The greatest of the prehistoric cities on the site of Troy was the sixth, but the second, as this photograph shows, was by no means negligible; here A, B and C mark the town walls of the city on the south-west side, while at D are house walls of later periods. It was the evident signs of a conflagration in this second layer that influenced Schliemann to identify it with the city sacked by the Achæan host. The three layers between second and sixth were small settlements rather than towns.

From Dörpfeld's "Troja und Ilion."

BRICK PALACE OF A PRE-HOMERIC PRINCE

Almost in the centre of the mound lie the remains of a great "megaron" or dwelling house, probably a palace, of the second or burnt city; at C and K on the one side and to a less extent at P on the other may be seen part of its walls of sun-dried bricks—B is the stone plinth that underlies them. At M and N is the door-pierced wall that separated the forecourt or portico from the central hall. Half of the megaron had to be sacrificed in making the excavation R on the left. H is undisturbed deposit.

mann as the city of Priam. It is largely built of unburnt clay tiles and timber resting on foundations and substructures of stone. All parts show traces of destructive fire. A mass of material from the upper part of the buildings buried such lower walls as are preserved for us.

It was in a hiding place in the walls of the second city that Schliemann discovered his "Treasure of Priam." The objects composing the treasure were found in a cubical mass and, in Schliemann's view, had once been contained in a wooden chest of which he also claimed to have found the key, but the object in question has since been shown to be a corroded chisel. The treasure, now in the Ethnographical Museum at Berlin, consisted of large copper or bronze bowls, of bronze tools and weapons, of many silver vessels and of a large hoard of gold jewelry of a characteristic and primitive kind. It included diadems with pendent chains and basket-like earrings with rosettes and twisted wires. Two splendid pins of twisted gold wire and a bracelet, though not found with the treasure, appear to be of the same period.

The third, fourth and fifth settlements all appear to have been unimportant villages, each placed on the ruins of its predecessor and gradually increasing the height and the area of the mound. The period which lies between the years 2000 to 1500 B.C. is assigned to this group of settlements.

The sixth city is that which mainly concerns us. Powerful bastions and walls spring up from the plain enclosing an area of more than twice the size of the second city. The deposits of the previous towns were brought to a level surface within its area. The sixth city is shown by evidence of architecture and pottery to have belonged to the Mycenean age, that is to the period of a brilliant civilisation from 1500 to 1200 B.C. on the shores of the Ægean Sea. This it is now believed was the period dimly recalled in a changed world by tradition and poetry and in which if anywhere the siege of Troy by an Achæan host must be placed.

On the north side of the town the walls of this sixth city are quite destroyed. Possibly the date of this destruction is as remote as the days of Archianax (550 B.C.) who is said by Strabo to have built the walls of the adjacent town of Sigæum with

stones from Troy. What remains is the great wall complete for about three-fifths of the circumference of the citadel on its east, south and west sides, and diversified by towers and gateways. The wall itself is for the most part built of massive squared blocks of local limestone, which received their final dressing in position. It consists of a sloping substructure rising to a height of some 20 feet and surmounted by a vertical parapet wall of 6 feet. It would seem that originally the upper part of the wall consisted of unburnt bricks, of a thickness of 14 feet. This appears to have been rebuilt during the Mycenean occupation, and a narrower stone wall replaced the original brick structure. A parapet was thus formed on its outer side for about a third of its original breadth, leaving a flat terrace walk on its upper surface.

A peculiarity of the wall is that its outer face is built in a polyonal form consisting of a series of short sides of some 30 feet in length. The angles are emphasised by the fact that each side in turn is carefully dressed so as to project some six inches from the face of one of its neighbours. We will make a circuit of this sixth wall from its western end where it is seen at its weakest and roughest. At the south-west angle we come to a gateway which was originally set under the cover of a projecting bastion, but was built up in Mycenean days to concentrate the defence. We pass along a stretch of massive wall—in part demolished to make room for a Roman theatre—and come to a gateway in the most southerly point of the town, protected by a powerful projecting tower.

From here the general line runs to the north-east and again the Mycenean wall is interrupted by a Roman theatre; beyond we reach another projecting tower, in the middle of the south-east face, and still farther on we come to the eastern gate which is carefully masked by an arrangement of parallel walls. The one overlaps the other so that an attacking force could only make an oblique approach in small numbers. Again we follow the line of the wall to the north-east and come first to a small gate, with oblique approach like the last, and then we reach the great north-east tower, the wall of which is still 30 feet high. It contained and protected a well sunk 25 feet deep in the live rock. We have described three-fifths of the wall of the citadel, but it must be

From Dörpfeld's "Troja und Ilion."

SORTING NINE TROYS WITH PICK AND SHOVEL

The south-western part of the mound affords a good object lesson of how century must be disentangled from century within the space of a few feet by the painstaking labour of the archæologist. Here A is a tower of the second city; B, C and D are house walls of the third, fourth and fifth settlements; the points marked E represent foundations of the sixth and greatest city; while the wall at the top of the cutting behind which a man is standing belongs to the seventh layer.

From Dörpfeld's "Troja und Ilion."

BATTLEMENTS BEFORE WHICH HEKTOR FOUGHT AND ACHILLES SULKED

Nine distinct layers go to make up the mound of Hissarlik in the Troad where Schliemann delved for Troy, some of them representing mere settlements, others strong cities where a Laomedon or a Priam might have reigned; these strata are numbered from the bottom upwards. Schliemann fixed on the second as representing Homer's Ilion; maturer criticism has accepted the sixth. The photograph above shows the ruins (marked A) of the great north-east tower of this sixth city; B, C and D are walls and steps of the eighth layer, a Greek settlement of historic times; E is the retaining wall of the precinct of Athene built in the Roman town, the ninth.

From Dörpfeld's "Troja und Ilion."

ILION'S CROWN OF TOWERS ON THE EAST

At another point on the eastern wall (marked A), a little farther south than the great north-east tower may be traced the side walls (B and C) of a projecting tower; at D and E are superstructures built to replace earlier ones of brick. The house wall at F and the massive foundation at H both belong to later layers, the seventh and the ninth respectively. The gate leading through the parapet on to the terrace in front of it and so to the tower is easily visible.

understood that the whole is on a surprisingly small scale. The walls described above form roughly a part of the circumference of an ellipse with axes of some 210 yards by 155 yards, and the extant length of wall is only some 370 yards.

Such buildings as remain of the Mycenean city were placed not far from the outer circuit of the walls; they had massive foundations analogous to those of the main walls, but little can be made out as to their character. No doubt other buildings occupied the middle of the plateau, but they were levelled away by subsequent settlements.

The seventh and eighth settlements are those of the historical Greek epoch and they are now represented by unimportant remains of buildings near the edge of the Mycenean city. They may be supposed to have been occupied by a population largely dependent on the succession of visitors like Xerxes and Alexander, brought to the site by its literary interest or by their own vanity.

Nothing remains of the Greek settlements in the middle of the area, which was levelled in Roman times to receive (ninthly) a temple of Athene and other buildings which were prompted not only by Roman interest in Homer but also by Roman pride in the home of their fabled ancestor Æneas.

The materials of the ninth city were gradually scattered during the succeeding ages in neighbouring churches and villages, and rubbish concealed the surface of the Roman city. A generation ago the site was forgotten, its story was transferred elsewhere, and a whole succession of civilisations, long before Homer and long after him, lay indistinguishable beneath the ploughed surface of an inconspicuous mound in the Trojan plain.

THE WONDER CITIES. XXIV

TYRE AND SIDON: CITIES OF PHŒNICIA

By the Rev. W. Ewing, M.C., D.D.

TYRE AND SIDON: CITIES OF PHŒNICIA

By the Rev. W. Ewing, M.C., D.D.

Of the Palestine Exploration Fund, author of "Arab and Druze at Home"

PHŒNICIA was the name given to the Mediterranean coast land stretching from Mount Carmel in the south to Mount Casius in the north. Beyond these limits Phœnician power was exercised but fitfully. Inland rose the uplands of Galilee, Great Lebanon and Nusariyeh. The eastern boundary cannot be fixed, but the western slopes must have fallen under Phœnician influence. Between these and the shore runs a narrow fertile strip of varying width, broken at intervals by headlands that drop precipitously into the sea. Along the edge of this verdure stood the cities of Phœnicia, like pearls strung upon a thread of emerald.

The Phœnicians were Semites, allied to the Amorites and the Hebrews, brought hither from their original home near the Persian Gulf probably by the same movement of migration. They closely resembled the Canaanites in many things, while the difference in language was only one of dialect.

Although one in race, the Phœnicians were never united in a single kingdom. Their history is that of their cities, each of which maintained independence under a ruler of its own. At intervals one or another attained pre-eminence and assumed a sort of hegemony, but apparently no dreams of empire were ever entertained. Important centres of life and enterprise were found at Aradus, Byblos, Berytus, Accho and many other coastwise towns, but of quite outstanding interest were the famous cities of Tyre and Sidon. Nothing certain is known of the origin of these cities. Native traditions ascribed a fabulous antiquity

to the Phœnicians. The priests of Melkart told Herodotus that their city and temple had been founded 2,300 years before his visit; that takes us back to about 2730 B.C. We reach sure ground in the Tell-el-Amarna tablets, which show that Tyre was a place of great strength in the fifteenth century B.C. Sidon was still older; for long it was the only Phœnician city known to the Greeks. Even after Tyre took the leadership the Greeks and Hebrews spoke of the Phœnicians as "Sidonians," and King Ethbaal of Tyre is called "King of the Zidonians." In Genesis x., 19, Sidon is mentioned as a city of the Canaanites. At the conquest of Joshua it is called "Great Zidon." It suffered disaster at the hands of the Philistines, and Tyre, reinforced by refugees from the older city, held for long the foremost place.

About forty-five miles south of Beirut two rocky islands lay off the coast. Hiram I. joined them together by an embankment. He built an extension towards the shore and led water to it from the mainland. Excellent harbours for ancient shipping were formed to the north and to the south, protected by massive piers and a breakwater and connected by a canal across the island. On the smaller island to the south-west stood a temple of Baal, called Zeus by the Greeks. On the larger was built the city containing the royal palace, the shrine of Agenor Baal, the temple of Astarte and—the chief glory of Tyre—the splendid temple of Melkart which counted among its treasures two pillars, one of gold, another of emerald. Within the eastern walls was the Eurychoros, the spacious forum and bazaar for the transaction of business. There were many dyeing establishments, the odour of which did not add to the city's attractions. The houses of the inhabitants were densely crowded and many storeys high—higher even than those of Rome.

The total area occupied was about 142 acres. When taken by Alexander the population was about 40,000. There are many traces of the gigantic walls that girt the city, reaching on the landward side the enormous height of 150 feet. From a boat in calm weather great blocks may be seen under water, whither they were tumbled probably by earthquakes. To ancient eyes that frowning fortress in the sea must have seemed the very embodiment of safe impregnability. Along the shore of the main-

land spread the city called by the Greeks Palaityros, from a mistaken idea that it was the older.

We know less about ancient Sidon. About twenty miles north of Tyre at a little distance from the shore, it stood entirely in the plain, connected, no doubt, with its chief harbour beside which the modern town is built. Unlike Tyre, it could expand at will. It was, however, more easily open to attack. Despite the mighty ramparts which the Phœnicians knew so well how to build, she often bowed down to conquerors. Few traces of the city are left above ground, but in the gardens and orchards coins, carved stones and pillars are constantly being found.

No one can tell when the present site was occupied. Remains of the old harbour are still impressive. It was formed by a chain of rocky islets running roughly parallel to the shore in front of the modern town. Towards the north this defence was strengthened by a continuous wall of huge blocks. A causeway was built connecting the coast with the most easterly island, which was probably always fortified, and on which stand the ruins of Kal'at el-Bahr. This left the entrance to the west of the island, and completely protected the harbour. Many of the blocks forming the piers have been taken away for building purposes, and rough seas now wash right over the rocks. A second but far more exposed harbour lay to the southward. The defences of Sidon would naturally be of the famous Phœnician "triple wall" type. In certain remains we have a glimpse of the method followed in fortification. The native rock was used up to a height of about 12 feet, cut to a perpendicular face. The structure was completed by courses of enormous blocks of stone the weight of which held them in position without clamps or mortar. They were laid with ends outward, so that their length, some 20 feet, formed the thickness of the wall. Square towers of even more massive construction projected from the line, whence defenders enfiladed assailants at the foot of the curtain. The walls were pierced by posterns and gates with projecting bastions. The ditches before the walls became moats when water was available.

This use of the native rock and the employment of massive blocks is characteristic of Phœnician architecture. Here, as in other things, there is marked lack of originality. But while

there was borrowing from both Egypt and Greece, we miss the Egyptian unity of design and the light, graceful beauty of the Greek. In a single mass of stone are frequently combined distinct architectural members—entire pediments and parts of supporting wall, shaft and capital of a pillar and so on. There is a preference for straight lines and right angles. The massiveness of the material made for great stability but for which the monuments that remain could not have outlived the earthquake shocks of 3,000 years. The characteristics of the architecture are well exemplified in the "Tomb of Hiram," one of the oldest monuments in Phœnicia, six miles from Tyre.

The ancient Phœnicians are said to have been proficient in philosophy, astronomy, geometry, arithmetic and navigation; and many inventions—among them, wrongly, that of glass—are attributed to them. They were the first to voyage beyond the sight of land and to sail by night with guidance of the stars. Great feats of seamanship they achieve in vessels not larger than our herring boats.

Shut in by the mountains on a narrow strip of land along the shore where alone harbours were possible of construction, the "Sidonians" were almost compelled to become sailors. There were no possibilities of piracy and their enterprises were confined to trading. Their success was due to the skill and intrepidity of their mariners and merchants, and to the progress of their sons in arts and manufactures. The Homeric poems extol the excellence of their artistic metal work and their garments of needlework and embroidery. The products of their booms were greatly enhanced in value by the famous dye extracted from shell-fish abounding in adjacent waters, first used by the Sidonians but known to the later world as "Tyrian purple." Their industries included the making of glass, and artistic work in gold, silver and other metals, precious stones and amber. They received materials of trade by road from the great eastern hinterland, and for extended markets were bound to push out seawards.

The rich, well-watered plains of Tyre and Sidon yielded grain and fruit in plenty, and famous wines were made from the produce of their vineyards. But all the world ministered to the people's needs. Great commercial prosperity brought splen-

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SUPPOSED TOMB OF A TYRIAN KING

Opposite page 207 will be found illustrated the famous "Sarcophagus of Alexander"; but such is the utter destruction that has overwhelmed the once mighty cities of Tyre and Sidon that there is little else of their splendour that survives to us in concrete form. Hence the unavoidable lack of photographs in this article. One monument there is, however: a tomb of immemorial age some six miles from Tyre known as the "Tomb of Hiram," the friend of David and Solomon.

dour to the cities and wealth to the citizens who went to great lengths in luxury and pleasure, while many vices were rampant in their midst. A darker Semitic strain found expression in the wild orgies of lust, self-mutilation and human sacrifice that marked the service of their gods. They were adepts in the art of kidnapping and drew profits from the slave trade.

Definite information is lacking regarding the early millenniums of Phœnician life. The familiar use of the Babylonian language and script, and especially the evidence of Babylonian influence in Phœnician art and religion, clearly point to ancient and intimate relations with Euphratean peoples. Egyptian influence is also obvious.

Thothmes I. (1541-1501 B.C.) overran the country; his son Thothmes III. (1483-1447), founder of the great Egyptian empire reduced the cities to tribute; and Egyptian kings, not without trouble, retained supremacy till the reign of Amenhotep IV. (1375-1358). In the Tell-el-Amarna letters in which the kings of Tyre and Sidon appear, we see the power of Egypt crumbling. For a time she kept her claims alive by occasional raids. A great migration of peoples from Asia Minor and Europe swept over the country about 1200 B.C., met defeat at the hands of Rameses III. on the borders of Egypt, and resulted in the settlement of the Philistines on the south Palestine seaboard. For the Phœnician cities ensued a period of comparative rest, only slightly disturbed by the invasion of Nebuchadrezzar I., Shishak, Solomon's father-in-law, and Tiglath-Pileser I. This was a time of great prosperity, in which the citizens of Tyre won special distinction.

Under Hiram I. the skill of the Tyrian workmen and artificers was already famous. They assisted in building David's palace in Jerusalem. In Solomon's day, for a consideration, they lent their aid to complete the splendid buildings on the temple hill. To Tyrian sailors the success of Solomon's maritime enterprises was due and his harem was graced by a royal daughter of Tyre. With the third king in succession from Hiram troublous years began and continued until Ethbaal, by fratricide, cleared his way to the throne. Ahab, King of Israel, married his daughter Jezebel. Two reigns later, according to legend, Princess Elissa escaped the toils of a palace intrigue.

Accompanied by many nobles, and with much treasure, she sailed westward, founded the colony of Carthage and appears as Dido in Virgil's Æneid.

In 877 B.C. Sidon and Tyre submitted to the Assyrian Ashurnasirpal, and "sent him presents." The Tyrian fortress defied the prowess of Shalmaneser IV., although he was assisted by a Sidonian fleet—the enemy learned to profit by the mutual jealousies of these cities. Sennacherib carried his victorious arms along the coast but failed to capture Tyre although it was deserted by its king, Eleulaios. A revolt in the coast lands was quelled by Esarhaddon who trampled Sidon down with true Assyrian "frightfulness." Tyre again escaped capture; but at length she was humbled, and experienced unusual clemency at the hands of Ashurbanipal. The decline of Assyria brought peace to Phœnicia and recuperation to her cities. Tyre then reached her heyday, vividly portrayed by Ezekiel (xxvii.-xxviii.) who also prophesies her doom.

A league was formed with Egypt and a colony settled in Memphis. At Pharaoh Necho's request, the Phœnicians dug a canal connecting the Red Sea with the Mediterranean. They sailed down the east coast of Africa, and three years later appeared at the Pillars of Hercules, having circumnavigated the continent—a feat of incredible skill and daring.

Sidon, devastated by pestilence, opened her gates to Nebuchadrezzar II. The Babylonian prince captured and destroyed the town on the shore at Tyre, but the island city defied him for thirteen years. The resistance was heroic, but the long siege destroyed her commerce; Tyre was shorn of her prestige, whatever the terms of her final submission were, and Sidon resumed the hegemony of Phœnicia.

In the early days of the Persian empire Phœnicia enjoyed peace and prosperity. Obeying an edict of Cyrus the Great, conqueror of Babylon, she assisted the returning Jews to rebuild their temple. With her navy she helped Cambyses in his Egyptian campaign, but refused to use her ships against her kindred in Carthage. Her fish-sellers gave trouble to Nehemiah at the gates of Jerusalem (xiii., 19). No doubt, greatly to her own profit, she helped the Persians at sea in their war with the Greeks. The transfer of her forces to the side of the enemy

brought Artaxerxes III. Ochus down upon her in a towering rage. Appalled at the fate which overwhelmed Sidon, Tyre saved herself by timely submission. When, after the battle of Issus, Alexander came, Sidon, risen from her ashes, received the conqueror with open arms and put her fleet at his disposal for his attack on Tyre. Here he encountered a desperate, and for a time successful, resistance. He destroyed Palaityros and used the building materials to construct a mole 65 yards wide connecting the mainland with the island. Then by an attack by land and sea, in which the ships of Sidon played their ignoble part, he compassed the fall of the fortress. Of the Tyrians, 3,000 were slain with arms in their hands; upon crosses set up on the opposite coast 2,000 captives were crucified; and of women, children and slaves 30,000 were sold to the highest bidder. Drifting sands widened the mole and made permanent the connexion between land and island.

With the coming of Alexander night fell upon the long day of Phœnician maritime ascendancy; but as centres of industry and commerce Tyre and Sidon enjoyed no little prosperity until the advent of the Romans, who granted to both the privileges of free cities.

People from Tyre and Sidon went to hear the preaching of Jesus (Mark iii., 8). Jesus visited the district (ib. vii., 24), and thought more of these cities than of those in Galilee (Luke x., 13). They appear in Acts xii., 20. Paul spent some days with Christian brethren at Tyre (ib. xxi., 3), and touched at Sidon on his way to Rome (ib. xxvii., 3). Tyre and Sidon became bishoprics. A basilica built at Tyre by Paulinus was consecrated by Bishop Eusebius in 333; on the same site, probably, the Venetians erected the church the splendid ruins of which are still extant and in which was the tomb of Frederick Barbarossa. Jerome, in the fourth century, calls Sidon "an important city," and Tyre "the most noble and beautiful city of Phœnicia, still trading with all the world."

The first Crusaders, in 1099, making direct for Jerusalem, left the Phœnician cities unmolested. Troops issuing from Sidon to oppose them were driven back and a rich booty was taken in the district. King Baldwin I. desisted from an attack upon Sidon on receiving a sum of gold, but the city proved

treacherous and was captured in 1111. Saladin recovered it for the Saracens after defeating the Crusaders at Hattin in 1187. Retiring from a battle with Melek el-Adil in 1197 the Christians, entering the place, found it desolate. King Louis IX. of France rebuilt the city with high walls and massive towers. The Templars bought it from Julian, its temporal lord, in 1260 and held it for thirty years.

Tyre, a strong fortress of the Moslems, was taken by the Christians in 1124 after a five months' siege. The captors were surprised at its strength, its high towers and spacious houses and the beauty of its port. Saladin in vain attempted its recovery after the battle of Hattin.

In 1291 the Christians of Tyre, hearing that Sultan Melek el-Ashraf had captured Accho with horrible atrocities, slipped away by sea that evening. Next day the Saracens took possession. Sidon, too, was forsaken, and the defences of both were destroyed. Tyre was deserted and lay in ruins for centuries. The spacious buildings erected by the Druse prince Fakhr ed-Din in the seventeenth century, in his attempt to revive the city, fell into decay. Such recovery as she has experienced Tyre owes to the Metawileh, who came from the mountains in 1766, took over the ruins and built walls and humble dwellings, covering about a third of the peninsula.

Sidon was not so completely deserted, although mostly in ruins. It was still a port of Damascus in the fifteenth century, with some little trade. Fakhr ed-Din built here a beautiful palace and a great khan for merchandise. He inspired a certain revival of industry and commerce, especially with the French. Latterly the stream of trade turned decisively towards Beirut.

Tyre now presents but a wretched appearance, huddled together on the site of the ancient island city. There is no trade or industry of note. Its 6,500 inhabitants eke out a slender livelihood by fishing, cultivating the plain and supplying the needs of travellers along the shore.

Sidon is about twice the size of Tyre, with better and more spacious houses. Fishing occupies some. A certain amount of trade is done by small vessels. The gardens and orchards in the plain are of wide extent, and great fruitfulness. Oranges are the main article of export.

The tombs of the ancients along the feet of the hill have yielded many things of intense interest—e.g., the tomb of Tabnit; the sarcophagus of Eshmunasar, now in the Louvre; and the beautiful sarcophagus, now in Constantinople, thought to be that of Alexander the Great.

The snow-capped peaks of Lebanon, still radiant in the dawn and glorious in the setting sun, witnessed the pomp and splendour of the far-off days, the mighty strongholds with their teeming populations, the bosom of the blue flecked with the white-winged messengers of commerce bearing to the world's ends the brave merchant pioneers who returned with the wealth of all lands to enrich and beautify their homes. Now these same hoary summits look down upon what is but a backwater in the stream of life where nature tries to hide with her luxuriance the crumbled ruins of a splendid past.

ANCIENT ARTS AND CRAFTS. XII

THE CLIFF DWELLINGS OF AMERICA

By H. J. Braunholtz, M.A.

THE CLIFF DWELLINGS OF AMERICA

By H. J. Braunholtz, M.A.

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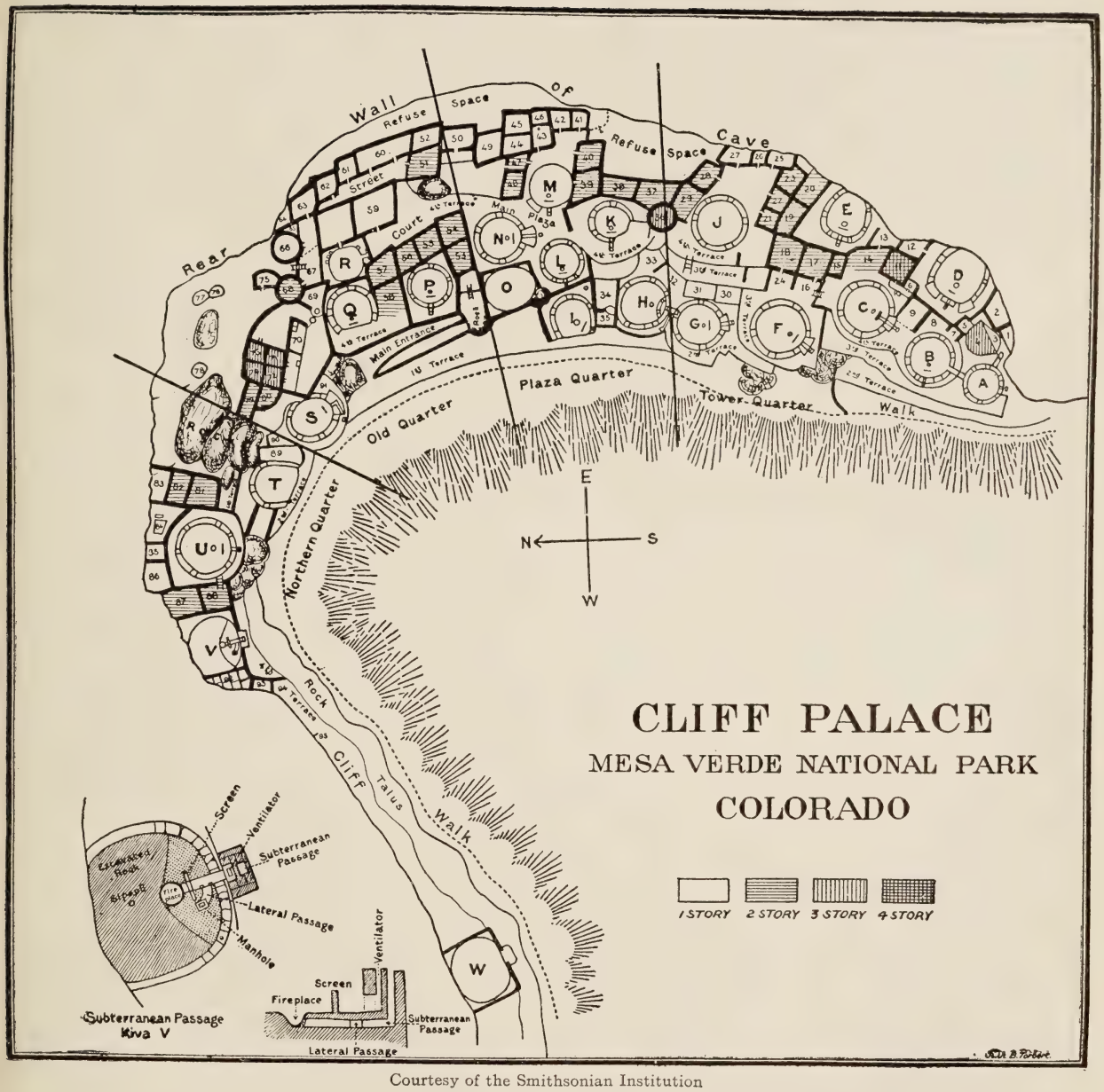
CAVES and cliff recesses have been regarded as a natural solution of the housing question in many countries and at many periods ever since the Palæolithic Age, and the troglodytic habit still persists in the heart of civilised Europe to-day. But there is one region in the world which may be considered as par excellence the home of the cliff dweller. This is the lofty plateau in the south-west of the United States, comprising part of the four states of Colorado, Utah, Arizona and New Mexico, and embracing the three great river systems of the Colorado, Rio Grande and Gila-Salt which lie near its periphery and almost surround it. Rich as this region is in natural marvels such as the Grand Cañon and the petrified forest of Arizona, it is hardly less remarkable for its archæological treasures. It is literally covered with the ruins of generations of former inhabitants.

The plateau averages more than 6,000 feet in height and is fringed by still loftier mountain peaks. Actually, it consists of a series of platforms at varying levels terminating abruptly in sheer cliff walls. Some of these platforms, or "mesas," rise out of each other in a succession of huge terraces; others stand out like flat-topped islands 2,000 feet and more above the surrounding plains, cliff-girt on all sides. The upper tributaries of the three great rivers have carved deep into the soft stone of the mesas, seaming them in all directions with narrow gorges or cañons. Here in these remote mountain solitudes the former homes of the cliff dwellers are to be found, all of them untenanted

to-day. High up in the cliffs on either side, precariously perched on narrow ledges of rock or half hidden in dim recesses, may be seen walls of masonry, some of them crumbling to ruin, but still visibly the work of human hands. At times you are inclined to doubt your eyes, so inaccessible do they seem. Often they can only be reached by the aid of ladders and ropes; their construction, the transport of the building materials to such sites, must have entailed prodigies of labour.

Cliff dwellings are not, however, all of this kind. They have been classified broadly into two distinct types: cliff houses, properly speaking, and cavate dwellings or lodges. The former are genuine houses, or clusters of houses, built into natural hollows in the side of the cliff; the rock may furnish their floor, and sometimes also their roof, but their main structure is of masonry. The latter, on the other hand, are artificial caves carved out of the softer layers of rock, or elaborations of natural caves. Those found in the Verde Valley in Arizona are entered through a narrow tunnel which leads back into a large chamber connected by passages with smaller rooms. In some of these cavate dwellings masonry has also been used as a supplementary device to partition off rooms or wall up a front entrance if too wide. A rigid line of demarcation cannot be drawn; there are numerous transitional forms. The relative hardness of the stone probably determined the builders' choice as between these two types, which appear to be contemporaneous; only the softer kinds of rock could be conveniently excavated with stone tools. It is instructive to find that in the Mancos Valley, where cliff houses prevail, cavate dwellings also occur wherever a local outcrop of softer shale permits of their construction.

The upper valley of the Rio Grande, in New Mexico, is richest in the cavate type, which is the only one found here; the cliffs of the Jemez Plateau fronting the river are literally honeycombed with these tunnellings, resembling a gigantic rabbit-warren. In Arizona, in the region of the Rio Verde, a tributary of the Salt river, numerous cliff dwellings of both types are to be found. Of the cliff houses the most striking, perhaps, and certainly the best known, has been called, somewhat inappropriately, "Montezuma's Castle." It stands high up in a vertical limestone cliff, 42 feet above the slope below,



Courtesy of the Smithsonian Institution

Photo by Underwood Press Service.

IN THIS CLEFT OF THE CAÑON SIDE MEN ONCE DWELT

Here and hereafter in considering Cliff Palace, that marvellous cliff town in a cañon side of the Mesa Verde, it will be of help to refer to the plan in the preceding page. This photograph, for instance, is of the southern end, known as "Tower Quarter"; the round tower from which it takes the name (No. 36 in the plan) may here be seen on the left, while the circular "kivas" visible to the right of it are those marked A to C and F to J. The figures of the party in the centre will give the relative size of the houses.

Photo by Underwood Press Service.

CLIFF PALACE, A WHOLE TOWN BUILT SECURE FROM MOLESTATION IN A CAVE

A closer and more detailed view of Cliff Palace is here given. The photograph is of the "Plaza Quarter" to the left of the round tower which may be recognised again on the right. In the foreground the cliff slopes down abruptly to the dry bed of the cañon cumbered with falls from the cliff; above is the rock-ceiling—a solid 50 feet to the mesa-top, tree-clad but free from flowers and undergrowth owing to lack of water. It is this dryness that gives a clue to the social conditions of the people who built such astonishing dwellings: their strange houses can never have been intended to stand long sieges, but rather intermittent raids from neighbouring and less sedentary tribes.

Photos by G. L. Beam, by permission of the National Park Service, U. S. A. (top), and by Underwood Press Service.

HOUSES AND GRANARIES OF THE AMERICAN TROGLODYTES

In the upper photograph here, we have the southern end of Cliff Palace viewed from the north; set in a broad cleft of the cliff, the houses climb inwards in terraces and in some cases reach a height of four storeys. The Mesa Verde lies in Colorado State but has no monopoly of cliff dwellings; the lower photograph for instance shows a well preserved example in Arizona State. The strange receptacle, shaped like a beehive or a swollen mushroom with a hole at the top, served the inhabitants as a granary.

and consists of five storeys rising from two ledges which are only accessible by means of ladders.

Rich as these two regions are in cliff dwellings, they are surpassed by the drainage area of the San Juan river, a tributary of the great Colorado. This is the "Region of the Four Corners," so called from the fact that here alone four of the States meet at a point. In one of these, the southwestern corner of the State of Colorado, stands the Mesa Verde, a typical cliff dwelling district. It was first thoroughly explored in 1891 by the Swedish archæologist, Baron G. Nordenskiöld, whose monumental publication marks an epoch in the study of the subject.

Rising to a height of over 8,400 feet with its flat wooded top tilted very slightly to the north of west, this plateau appears from a distance like a solid, unbroken mass of rock. On entering it, however, along the valley of the Mancos river which divides it into two parts, we find that it is cut and seamed into a perfect labyrinth of cañons and gullies ramifying from the main river valley. These gullies are flanked by lofty cliffs of yellow sandstone, from the bases of which steep slopes of talus or "scree" run down to the beds of the streams. At their upper ends they terminate abruptly in natural amphitheatres of rock. Water only flows in the streams in the rainy season when their dry courses are converted suddenly and momentarily into raging torrents. But water is never far beneath the surface, and springs are frequent.

Numerous caves have been "weathered" out of the softer stone, varying in size and shape from small niches to mighty vaults. As we make our way up any of these tortuous cañons —not always an easy matter on account of the rocky boulders which choke their bottoms—we are astonished to find the cliff caverns occupied by buildings as various in size and shape as the caves themselves, ranging from single cells, used no doubt as granaries, to whole clustering villages. Some are poised dizzily, like human eyries in the rock. Many, however, are not quite as inaccessible as they appear, and can be reached by a rough scramble either from the valley or from the mesa top; often the approach is by way of rock-cut steps, fashioned by the builders and now almost worn away, but still clearly visible and offering

a practicable means of ascent in parts to an active climber. "Cliff Palace" and "Spruce Tree House," the names by which two of these buildings are known, are the largest and most remarkable of their kind, though they are almost rivalled by "Betatakin" and "Kitsiel," two similar buildings in the Navaho Reservation to the south-west. The Mesa Verde is now preserved as a national monument, and these two amazing structures have been restored under the supervision of one of America's leading archæologists, Dr. J. W. Fewkes, Chief of the American Bureau of Ethnology, who has written monographs on the subject. The restoration in this case consisted in clearing away the rock débris and strengthening the walls to prevent further disintegration. This was necessary to preserve them from the ravages of time and from the vandalism of curio hunters at whose hands they had already suffered much irreparable damage.

"Cliff Palace" was discovered in 1888 by Mr. R. Wetherill, whose intimate acquaintance with the whole region has been of invaluable service to archæologists. The first extended account we owe to Mr. F. H. Chapin, who thus describes his first impressions:

> "At about three o'clock we reached the brink of the cañon opposite the wonderful structure. Surely its discoverer had not over-stated the beauty and magnitude of this strange ruin. There it was, occupying a great oval space under a grand cliff, wonderful to behold, appearing like an immense ruined castle with dismantled towers. The stones in front were broken away, but behind them rose the walls of a second storey; and in the rear of these, in under the dark cavern, stood the third tier of masonry. Still farther back, in the gloomy recess, little houses rested on upper ledges. A short distance down the cañon are cosy buildings perched in utterly inaccessible nooks. The neighbouring scenery is marvellous; the view down the cañon to Mancos is alone worth the journey to see."

This stupendous building contains 117 rooms (including "kivas") on the ground floor alone and covers an area of over

The food platter on the right comes from Four Mile Ruin, Arizona, and is painted with a weird and legendary beast.

Vase from Four Mile Ruin, notable for its highly stylised animal and geometrical decoraation in dark brown on cream.

Two views, from above and from the side, of a beautiful vase from Pueblo Viejo, Arizona.

Above and below are two aspects of the same bowl, a food vessel found at Four Mile Ruin, painted with a conventionalised human figure.

Above, a food bowl from Shumopavi, Arizona, bearing what looks like a stylised face; on left, further vase from Four Mile Ruin.

Courtesy of the American Bureau of Ethnology

FAULTLESS POTTERY MANUFACTURED WITHOUT A WHEEL

People who built such dwellings as Cliff Palace, Spruce Tree House or Montezuma's Castle are apt to dazzle us with their greater achievements to the exclusi of their smaller triumphs. But that those hands which were strong to labour with stone were equally nimble with the yielding clay is amply witnessed by t

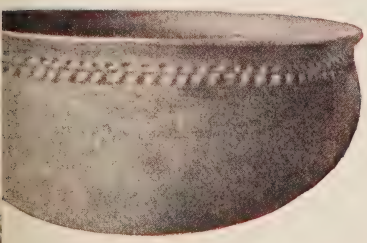
Left, strange geometrical designs in black on cream on a food bowl found at Homolobi, Arizona.

Above, a lovely vase from Chevlon, Arizona, with richly coloured polychrome designs.

Second food bowl from Shumopavi (above), with incurving rim, in rich creams and browns.

Food bowl from Chevlon with marked symmetry in its goemetrical design.

Curves are the dominant motive in the ornamentation of this fine bowl discovered at Chevlon.



Beautifully shaped pitcher (above) discovered at Four Mile Ruin.

The notable feature about these vessels from Pueblo Viejo (two on left and one on right) is their clear deviration from basket ware.

—BY THE CAVE-DWELLING INDIANS OF NORTH AMERICA

page; for like the pottery of the more southern districts, all these vessels were made without a wheel. They were made for funerary purposes; most of those in common use resembled the "basket ware" at the foot of this page.

400 feet in length and 80 feet in depth in the wider or central portion.

The structure is very irregular in plan; like all cliff houses it follows the contours of the cavern in which it stands. Moreover, it was clearly not designed by a single master hand, but has grown to its present size by accretion at various periods. Nevertheless, it follows the general principles of construction noticeable in all the larger houses. In front are three terraces excavated from the talus slope; here are the "plazas," open spaces with level floors, where the inhabitants forgathered socially around open fires. Behind and above rises the building itself in a series of tiers, four storeys high in places. It consists of a number of smallish rooms more or less rectangular in shape and grouped in clusters partly separated by open courts. The masonry is neatly dressed, the stones cemented with clay in regular courses and the joints "broken"—an unusual feature in cliff houses. Retaining walls were built and the foundations skilfully adjusted to the uneven surfaces. In some buildings the walls have actually been "anchored" by poles sunk in holes drilled into the rock floor. But the architects had not learned the art of bonding their walls at the corners, and they were ignorant alike of the principles of corbel and arch.

The ground floor compartments have no exterior doors and were apparently used for storage. The upper storeys are pierced with small windows and often with T-shaped doors. Similar doors may still be seen in modern pueblos as the curious conglomerate villages of the aborigines of Arizona and New Mexico are called, from the Spanish word. These doors are designed on principles of the strictest economy, the lower part being just wide enough to admit the legs, the upper part broader so as to allow passage for bundles of wood or other packages as they were carried in. The upper storeys were reached either from inside by ladders leading to hatchways in the floors, or by means of balconies which originally projected in front of the doors. The roofs were of timber covered with brushwood and bark, and a hard, even layer of clay pressed down over all. These were the ordinary living and sleeping apartments; some of them were set aside for special occupations of the womenfolk, such as grinding corn or making pottery. A room was found

with the grinding stones still in position; from it a small peep-hole looks out on to a courtyard, so that the women might be able to observe passersby as they worked.

Many of the rooms have fireplaces, for the wind blows cold here in winter and frost and snow are common. The walls are plastered inside and out with clay in which impressions of small human hands may still be seen, showing how the work was done. There were no chimneys and the walls and roof of the cave are blackened with smoke. At the back of the building are open spaces; and it appears from the deposits of guano that these were the quarters of the domesticated turkeys which these people kept.

The most peculiar and characteristic feature of these cliff houses remains to be mentioned. This was the "kiva," or "estufa" as it was originally called under the misapprehension that it corresponded to the medico-religious "sweat house" of the Navaho and other Indian tribes. These kivas are circular subterranean rooms, built underneath the plazas or terraces in front of the house. Such rooms form an integral part of every cliff house of any size in this region; "Cliff Palace" has twenty-three of them. They are now exposed through the collapse of their roofs, but in their original condition they were invisible from outside, except for a small opening in the plaza floor from which, perhaps, a ladder projected as in the modern pueblo.

They are generally about 6 feet deep and 15 to 20 feet in diameter. All round the sides, at a height of about 2 feet, runs a ledge or banquette divided into alcoves by six pilasters. These pilasters supported a timber roof in which each layer of beams was placed diagonally across the corners of the layer beneath so as to produce a kind of shallow vault. In the centre of the floor was a fire pit and at one point an L-shaped ventilating shaft entered the room at the floor level. Between the opening of this shaft and the fire was a low screen or deflector, apparently for the purpose of distributing the inflow of air evenly about the room and preventing the fire from being blown about by the direct draught. The walls were carefully plastered and often ornamented with a kind of dado in colour. Sometimes a tunnel connected the kiva with one of the ordinary rooms, but the main entrance was probably through the roof.

Such were the ceremonial chambers in which the religious life of the clans centred. They were reserved for the men, and served at once as temple, council chamber and club house. In them at festive seasons sacred dances were performed; at other times the men would meet there to gossip or work at their looms. Such, at least, is the inference that may fairly be drawn from analogous chambers of the pueblo peoples. There is in the kiva one diminutive but important feature which emphasises the link between kivas ancient and modern. This is a small hole situated near the fire-pit and opposite the deflector. It is invariably present in modern Hopi kivas and is called by them "sipapu." According to Hopi mythology the human race was created deep down in the earth, whence it emerged, struggling ever upwards by four stages of ascent, into the light of the present world. The sipapu symbolises the orifice from which mankind emerged, and is a means of communication with his Creator. It is the most sacred part of the kiva. Buildings such as "Cliff Palace" were occupied by a congeries of small clans, each with its own kiva; hence the number of kivas in a building would indicate roughly the number of clans who inhabited it. In nothing is a people generally more conservative than in its religious institutions and it is probable that the kiva points to an earlier nomadic stage in the history of these people when they dwelt in circular huts or tents.

The cliff dwellings impress us by their romantic situation and wonderful adaptation to a difficult environment. Their very irregularity lends them a kind of barbaric grandeur, but they were clearly not constructed to please the eye. They were the expression of the religion and sociology of their inhabitants in their kivas and clannish clusters of rooms. Partly, too, their form was dictated by the force of environment. Unable to build outwards owing to the limited floor space, the architects were compelled to build upwards; thus the same force which has produced the modern skyscraper may here be seen at work in the same continent but on a smaller scale.

Much may be learned about the life of this folk from the relics which have been found in their buildings. The climate is extremely dry, and a layer of powdery dust, the excavator's "bête noir" as it rises in choking clouds at the touch of his spade,

has acted as a wonderful preservative. Bodies have been found where they were buried—for both burial and cremation were in vogue—perfectly desiccated, retaining the skin, nails and hair. Even such perishable objects as baskets and textiles still rest unrotted where they were last dropped, to attest the craft of hand and eye of their makers. We find that they made sandals and stout cord from the yucca plant, stripping the tough fibres from its tapering leaves. They wove warm winter clothes of cotton and lined them with the feathers of their turkeys. Rarely has a primitive people excelled them in the making of pottery vessels or shown such simple taste in the patterns with which they adorned them. In their vessels for cooking and storing water, often of immense size, the womenfolk turned technique to decorative account by making the coils overlap each other as they wound upwards. This is called "corrugated" ware and is one of the specialities of the cliff dwellers. But the finest vessels, bowls with which they paid a last pious tribute to their dead, were not only perfectly rounded without the aid of the wheel, but had the additional charm of patterns in the form of steps, meanders, spirals and other symbols in black and white. Among their fictile products were also comely mugs with handles and well-shaped ladles.

They were a Stone Age folk. Well-worn grooves in the cliff walls show where they ground down their stone axes and sharpened their awls of bone. It is truly amazing to reflect upon the labour involved in felling trees and cutting up the timber for roofing with such tools. The ends of the roof beams are never clean-cut; they plainly show how they have been worn painfully away, as it were, by the slow process of chipping and pecking. But if it cost them labour to shape their stones and cut their timber, what of the toil of transporting these materials down cliff faces and along rock ledges to the sites of their homes? This is something that almost passes belief. Agriculture was their staple industry and their main source of food. They raised crops of maize and also beans and gourds, husbanding the water in reservoirs and irrigating the steep slopes with ditches.

Why did this folk set their homes in the cliffs? Why build at such cost, and make their "exits and their entrances" so arduous as they "clasped the crag with crooked hands" and per-

SAFETY FOR THE HOUSEHOLDER BOUGHT AT A HEAVY PRICE

Pre-eminent though Colorado may be with its unrivalled settlement of Cliff Palace, undoubtedly the most imposing single cliff dwelling to be found is in the State of Arizona. Situated on two ledges in the cliff face of Beaver Creek, it is known as Montezuma's Castle, although it can boast no real connexion with that unfortunate Aztec prince; 42 feet of vertical limestone separate it from the point where the cliff begins to slope towards the bottom, and it is built in five storeys. It is now a national monument.

Photo by G. L. Beam, by permission of the National Park Service, U. S. A.

WHERE THE CLIFF DWELLERS FOREGATHERED FOR RITUAL AND DISCUSSION

The strange "kivas" of the cliff dwellings are well illustrated by this photograph of the interior of Spruce Tree House showing two of them at close quarters. The kiva was a circular pit approached by a hole in the now vanished roof; in the centre was a fire-pit, and round the wall a low bench; at one point a ventilating shaft entered at floor-level; and between fire and shaft was a screen. As for their purpose, they were apparently used for gatherings partly religious and partly social, only males being admitted to them.

Photo by Underwood Press Service.

WHERE THE CLIFF DWELLERS SACRIFICED TO SOME FORGOTTEN GOD

Before one of the cliff settlements in Colorado lies this great ornamental sacrificial rock. The markings on it—zigzags, concentric circles and spirals—show how universal are the first springs of art all over the world: there is but little to distinguish them from the British rock carvings. Similar ornamentation appears in the form of dados and friezes within the houses.

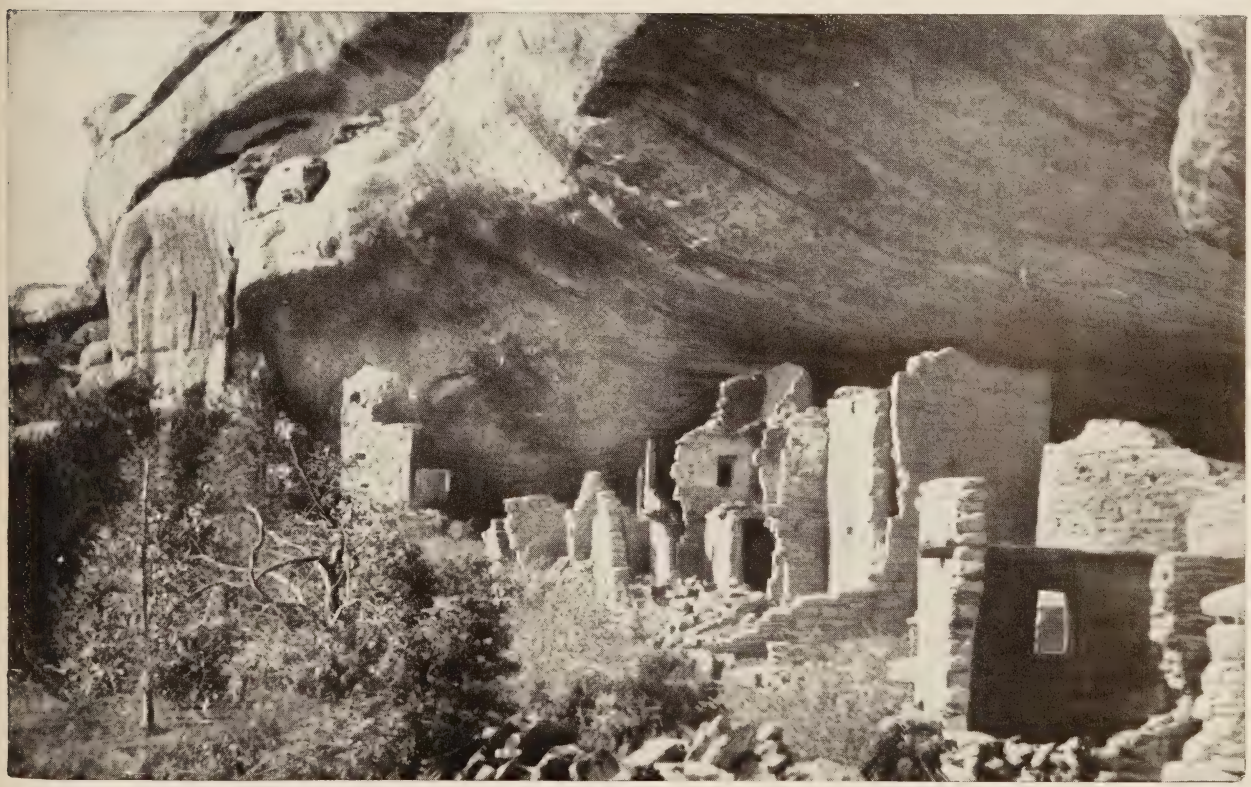


Photo by Underwood Press Service.

PERCHED ABOVE THE TREE-TOPS; SPRUCE TREE HOUSE

In Colorado the next largest settlement after Cliff Palace is Spruce Tree House; it is in the cañon of the Mancos river on the borders of New Mexico and not very far from Cliff Palace. The country, however, is better watered as may be seen from the more luxuriant vegetation, and from the tree-tops on the left, which suggest the height above ground of the houses. These last are seen to be in a somewhat more ruinous condition than those at Cliff Palace, which has of late been carefully restored.

Photo by Underwood Press Service.

SAFE FROM ATTACK BY BEAST OR MAN

Near view of another cliff dwelling, in Walnut Cañon. These seemingly inaccessible houses were approached by means of wooden ladders or steps cut in the rock and could be easily defended; their material is stone dressed small and cemented with clay. The roofs have now mostly disappeared, but were made of timber beams cut painfully to shape with stone tools.

formed daily feats of rock-climbing? No people has greater need of defence than an agricultural community, with its stores of food and relative wealth, set amongst nomad hunters (such as the Navaho and Apache were formerly) poorer but more virile through their mode of life. Always the fringes of agricultural regions have suffered from the predatory habits of nomad neighbours. It was this condition which produced the Great Wall of China; may not cliff dwellings have had their origin in the same way? If we look at a dwelling like "Eagle Nest House" we can hardly doubt that defence was the motive for selecting such a site. Strong arguments have been brought to bear against the defensive theory and the matter is still in dispute. Some of the buildings appear to have been mere farming outlooks; some of the more inaccessible of them were perhaps only used as a temporary resort during moments of danger. One of the main arguments against the defensive theory is that the defenders could soon have been forced into submission for lack of water. But quite apart from the fact that springs exist in the back of many of these caves, and that water could be stored in large jars and would keep fresh for many days in the pure elevated air, these primitive peoples were never likely to have had to endure a long siege. It was sudden raids which they had to guard against and for this purpose their dwellings were well chosen. Had an attacking force felt inclined to sit down to a regular siege, its position would soon have been made intolerable by showers of stones and arrows from the cliffs above. Some buildings were actually provided with battlements and loopholes for arrows placed at such angles as to command all the approaches. In these at least the motive of defence is clear beyond question. If this view be correct, it also explains why the cliff dwellings were subsequently abandoned as increasing numbers inspired confidence. Climatic changes and a diminution in the water supply may also have played a part. And it must be remembered that closely associated with the cliff houses are numerous ruins of similar construction both on the mesa tops and in the valleys below.

With a few exceptions, such as the Cañon de Chelly, these cliff dwellings must be regarded as prehistoric in the American sense, that is, pre-Columbian. No traces of European influence

have been found in them in the shape of metal tools, trade beads or similar objects. Nor do the annals of the Spanish adventurers, who first penetrated this region under Coronado in 1540 and colonised it half a century later, make any mention of cliff dwellers. Upon the crumbling walls of one building called "Sun Temple" a tree showing 360 annual rings of growth has been found. The evidence is cumulative that these dwellings had been built and abandoned not less, and perhaps, considerably more, than 500 years ago. Some of the pueblo peoples have traditions of having migrated from the north and of having dwelt in cliff houses in the past, and from the similarity of their culture in many significant details we may fairly conclude that some of the descendants of the cliff folk are living in the pueblos of the Hopi and the Zuñi at the present day.

RECORDS OF THE TOMBS. IX

THE WONDER OF THE ROMAN CATACOMBS

By Edward Hutton

THE WONDER OF THE ROMAN CATACOMBS

By Edward Hutton

Author of "Rome," "Italy and the Italians," etc.

IT has often been remarked that in any historical exploration of the Eternal City as we have it to-day an empty gulf seems to separate Ancient and Christian Rome. For the really primitive churches have for the most part been destroyed or completely rebuilt, so that the earliest Christian monuments left to us are centuries later than the last pagan buildings. This space of time, almost unrepresented in the city as we see it to-day, is filled perfectly by the catacombs, the burial places of the early Christians. Five of these date from Apostolic times; of the rest, the greater number are of the second century A.D.

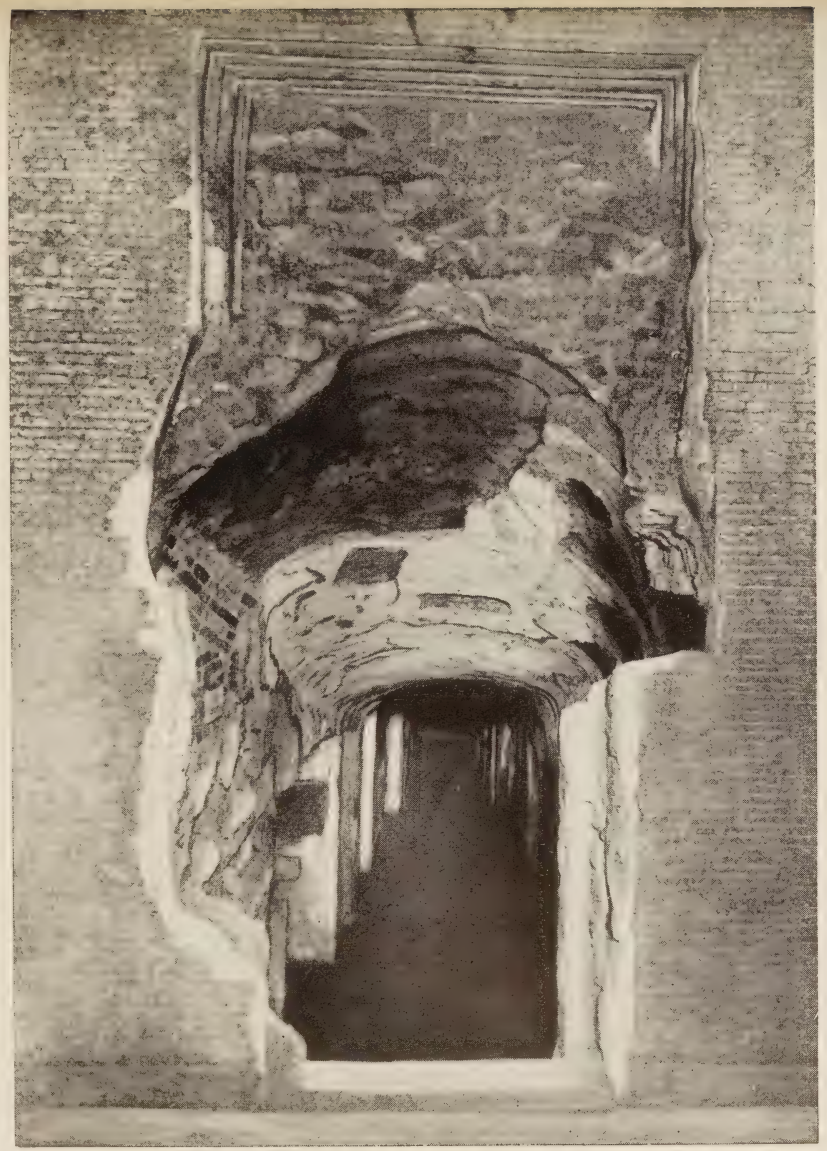
These lie always outside the walls (for burial within the walls was forbidden) north, south and east of the city for the most part, the more important of them, the Catacombs of S. Sebastian, S. Callixtus, SS. Nereus and Achilleus, and Prætextatus, being beside the Via Appia and its branches. On the Via Labicana to the eastward near the Tor Pignattura, outside the Porta Maggiore, are the Catacombs of SS. Peter and Marcellinus; outside the Porta Portesi, the Catacombs of S. Pontianus; outside the Porta Salaria, the Catacombs of S. Priscilla; and under the church of S. Agnese Fuori, those of S. Agnese. These are the chief of about forty-five catacombs in all. The region in which they lie, always to the left of the Tiber and within three miles of the walls of Rome, consists of volcanic rock known as "tufa," and it is in the "tufa granulare," which is easily worked, that almost all the catacombs have been excavated.

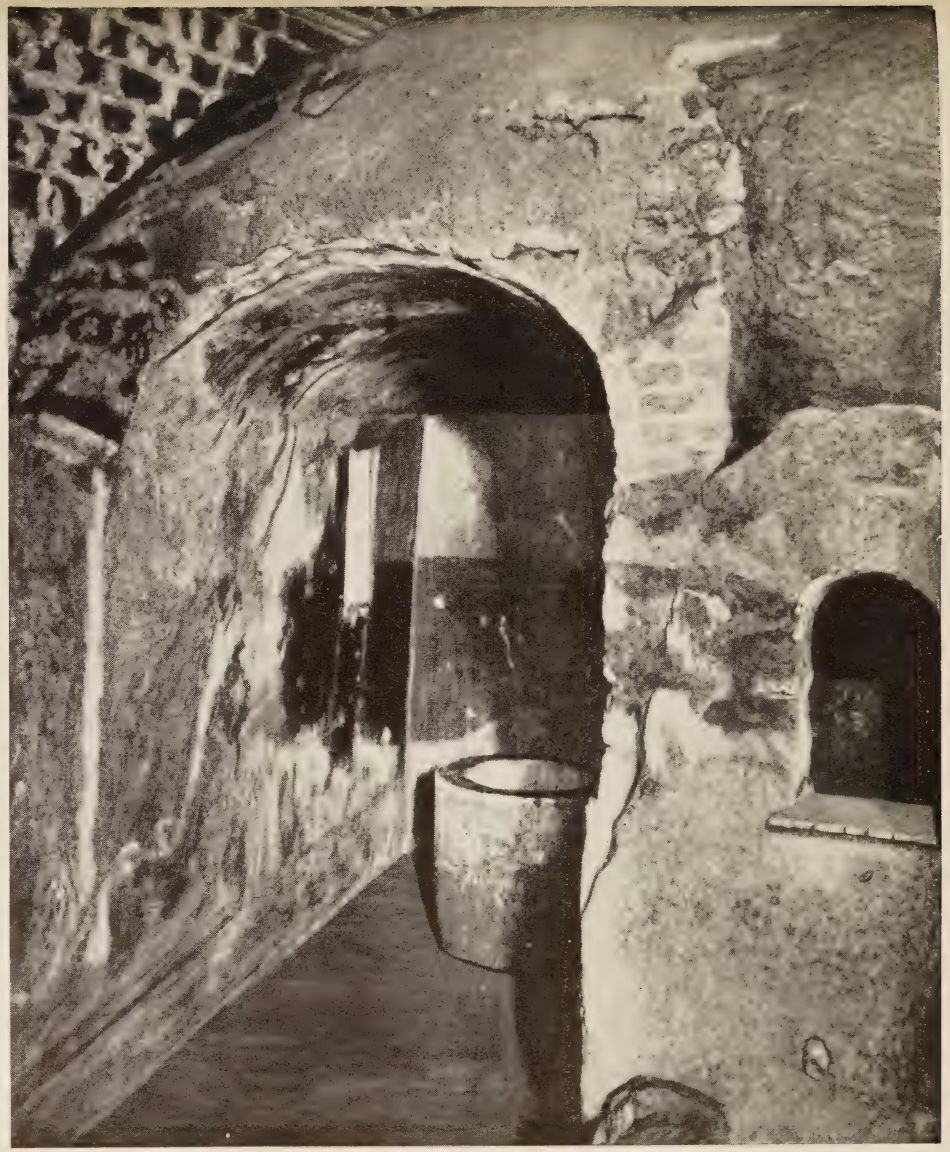
All of them have much the same character. They consist

of an immense maze of subterranean galleries, one above another, cutting one another at right angles, sometimes straight, sometimes winding, now and then leading to or diverging from a centre. These galleries are supported by their tufa sides, and the roof is generally flat, though sometimes very slightly vaulted. In the tufa sides are excavated the tombs or "loculi." Only a fraction of these galleries has ever been explored, and our knowledge of their extent is extremely limited. It has been calculated, however, that they measure not less than 587 miles in total length and contain at least six million burials.

The catacomb was thus the Christian cemetery. But it was more than this; the catacomb, in fact, was the very cradle of Christianity. While the populace of the great capital amused itself at the baths, or grew weary with horror at the Colosseum, the little society of early Christians, driven underground, waited, not without songs—the songs of children mainly, we are told—beside their tombs in these burial places. Gradually these grew outside the city about certain villas along the Appian Way—the villa of Lucina, for instance, or the house of Cecilia, places excavated by the householder and inviolable, as were all places of sepulture declared by their owners to be religious. There, in the darkness, lighted only by occasional "luminaria" or light-shafts, they celebrated their mysteries even in the time of the Apostles: the Mass, the "Commendatio Animæ," the "Funeralia"—refusing always to speak of the departing brother or sister as dying, but rather as of one summoned or called away, "accersitus," as the beautiful Roman inscription has it: "accersitus ab angelis"—summoned by angels.

There lies the secret of the catacombs—their secret and their charm. The Christian alone in that great Roman world found hope in his heart. Here in the catacombs, for the first time, the power of death was denied. And, as though to prove its new faith, its new certitude, its belief in the hope that it alone had dared to offer mankind, Christianity made its first home in the catacombs, the cemeteries of its dead. They, too, are of our company, it seemed to say, for death is not death but a sleep. "You see," says Lucian, "these poor creatures have persuaded themselves they will live for ever." Their serenity was in contrast with pagan hopelessness and Jewish fussiness. They called





Photos from "Roma Sotteranea Cristiana," by Marucchi.

SOMBRE AND MYSTERIOUS ARE THE WINDING PASSAGES OF ROME'S SUBTERRANEAN TOMBS

Within the compass of the vast Cemetery of Domitilla there is a region known as the Hypogeum of the Flavii, a private cemetery of a Christian family of the patrician order. On the left is the entrance to these catacombs and the long main brick-built gallery with crypts and passages opening from it on either side. The other photograph shows the end of a gallery in the same Hypogeum of the Flavii, which branches off the main corridor immediately on the left of the entrance; in this secondary branch is found a circular water-tank, probably a piscina, used by the ancient worshippers of Christ in these extensive underground shrines.

FORERUNNER OF THE CATACOMBS: COLUMBARIA IN ANCIENT ROME

Pagan tombs were of two kinds, viz.: family tombs (gentilitia) and those of a society of families (columbaria). In origin the Christian catacombs, which are an evolution of the pagan tombs, belong to the former category, but their later development attaches them to the better class. The pagan cemetery illustrated here is one of the largest of many on the Via Appia, and is very typical of the structures that inspired the excavations of the Christians. Notice the sepulchral monuments set in the niches.

Courtesy of E. N. I. T.

MEN WHO TOOK THEIR LIVES IN THEIR HANDS FOR FAITH'S SAKE

Situated beneath that triangular piece of ground which intervenes between the Via Appia and the Via Ardeatina are the catacombs of S. Callixtus. The galleries and crypts have yielded a rich harvest of information concerning the early Church, and there is an amazing amount of decoration. This fresco in one of the "Chapels of the Sacraments" represents SS. Policamus, Sebastian and Curinus, brethren of the early Church.

Courtesy of E. N. I. T.

GRAVES AND PAINTED FRESCOES IN THE CATACOMBS OF S. CALLIXTUS

On the right and in the centre of this photograph will be seen three of the loculi typical of the thousands in which the faithful band laid to rest the remains of their comrades. At burial the forbidden rites were performed and the grave was sealed either with a slab of marble or with baked clay, on this afterwards was inscribed the name of the dead, and the walls around it were decorated with symbolic frescoes. In the central apse is the figure of Christ, attended by two of the faithful.

the pagans "those without hope." "Spes" (hope) is the word perhaps most frequently found in the catacombs.

And so, in the periods of persecution at least, these cemeteries, later to bear the names of saints—S. Callixtus, S. Sebastian, S. Balbina—became at once the refuges of the Christians and the cradle of Christianity. There the Christian Church spent its childhood, in those five especially which date from Apostolic times and which were added to little by little, till in the third century we find some forty-five. Only twenty of them remained in the hands of private owners, the rest being under the government of the "Ecclesia Fratrum." Gradually the Church took command, attaching each cemetery to a parish church; and the catacombs her first possession, remained for ages the most holy shrines in the city. "The people of Rome," writes S. Jerome, "have left the ancient temples covered with cobwebs and rust, the golden Capitol squalid with filth, while they pour out from the city and run to the tombs of the martyrs."

Such a crowd—hardly different perhaps in essentials—goes out of the city to-day by the Porta S. Sebastiano, on January 20 and November 22, for the feasts respectively of S. Sebastian at S. Sebastiano, and of S. Cecilia at S. Callixtus. It is an experience to make part of that crowd and to see the catacombs in such company and circumstances lighted up for the "festa"; but it is not an experience which many will desire to repeat. In any case, the ordinary traveller will generally visit the catacombs in very different company, as one of a crowd of tourists in cabs and motor-cars, and amid this throng of often indifferent and always bewildered and hurrying strangers it is difficult to understand what one is really looking upon. But let the traveller come along Via Appia in full summer time when the city is almost free of visitors, and in the early morning when the Way is largely deserted; then, it may be, he will understand something of what S. Jerome felt; and, more fortunate still, hear perhaps what Pliny heard, caught almost in spite of himself by that morning song, blithe and fresh like the morning itself, as he passed on his way to the city.

Coming thus to the Catacomb of S. Callixtus on the Via Appia, certainly the most characteristic and perhaps the most important of all, one enters by a little doorway and, crossing the

vineyard, comes to a building on the left, an ancient oratory that has been rebuilt and which is known as the Chapel of SS. Sixtus and Cecilia, for it stands over the crypts where they were buried. Here the catacomb or cemetery was reached by two stairways, both dating from the earliest times, and one of these is still in use. In the times of persecution these stairways were closed or destroyed and a secret way provided. To-day, taking a taper and accompanied by the little monk who acts as a very excellent and courteous guide, one descends by a stairway midway between the two ancient ones and comes at once into a little chamber whose tufa walls are honeycombed with graves and covered with inscriptions and "graffiti," or rude mural engravings.

From this chamber one passes along the gallery on the left to the Crypt of the Popes, so called from the tombs of the popes who were buried in it, of whom four of the third century have been identified and two others, Sixtus II, and Urban I., are presumed to have lain here. The "cubicula" or crypts of which this is a large example were chambers usually of small dimensions, excavated in the sides of the galleries. They are of all sorts and sizes and shapes and often they are double and sometimes even quadruple. They were, or at any rate came to be, small churches or chapels, subterranean oratories in which, from the very earliest times of the Apostles, Mass was said, the Eucharistic Sacrifice offered, and where, no doubt, the faithful gathered for various offices of piety, not all concerned by any means with death. They were, in fact, the first churches, and the originals of the great basilicas of S. Agnese, S. Paola, S. Lorenzo and others. In the centre of the Catacomb of SS. Nereus and Achilleus, for instance, may be seen the Basilica of S. Petronilla, a quadrangular and glorified cubiculum, excavated in 1875, with nave and aisles and forecourt and a roof which projects into the air. Not all the cubicula were in darkness. Some were lighted by a shaft called "luminare," and such crypts were known as "cubicula clara." Often there were shafts for air, but these were seldom capable of giving much light.

The Crypt of the Popes in which we stand has been saved to us by De Rossi. The walls were once covered with marble, probably in the fifth century, and portions of this lining and of marble columns may be seen; but originally it was more or less

Reproduced from "Roma Sotteranea Cristiana," by Marucchi.

PAINTINGS MADE UNDER ROME WHEN CHRISTIANITY WAS STILL YOUNG

It is a mistaken idea that the early Christians were forced into excavating secretly in the bowels of the earth because open sepulture was denied them; what was forbidden was the celebration of the Eucharist or other such ceremonies at the interment. Indeed, the catacombs were open to all, for it was only to the elect that their symbols had any meaning. Above are seen the figures of Veneranda and Petronilla behind which are the two "loculi" that held their bodies, and below is a brightly painted crypt in the Catacombs of Domitilla.

as we see it now, a chamber upheld by its tufa walls, with an altar tomb beside which stood the episcopal chair. Above is an inscription of Pope Damasus of the fourth century who restored this and other Roman catacombs. S. Jerome was his secretary. From this inscription we gather among other things that S. Damasus regarded the popes buried here as a guard about the altar of Christ. These popes were S. Anterus Martyr, S. Fabian Martyr, S. Lucius Martyr and S. Eutychianus; S. Sixtus II. Martyr also lay here.

From this papal cubiculum we pass into another chamber, of irregular shape and well lighted by a large luminare. This is the Crypt of S. Cecilia. Near the entrance is a wall painting of the seventh century in which the saint is represented in a garden of roses in the attitude of prayer. Originally perhaps a mosaic stood here, maybe of the same subject. The picture is entirely covered with "graffiti" scratchings of the pilgrims. Among the names one finds many of priests and one of "Ethelred Episcopus," perhaps a Saxon bishop. Beneath is a niche, once lined with porphyry and now having a painted bust of Christ, and close by is a vested figure of S. Urban, both of the eleventh century. Here, too, was the tomb of S. Cecilia who was buried here after her martyrdom, and here Pope Paschal discovered her body in the attitude in which Maderna has shown her in his recumbent statue of S. Cecilia in Trastevere whither Pope Paschal transferred her.

There follow as we pass again down the galleries five cubicula known as the "Cubicula of the Sacraments." They date from the end of the second century, and are ornamented with wall paintings. In the first is a wall painting of the Saviour raising Lazarus, in the second one of Moses striking the rock—that is, scenes of deliverance. As though to emphasise what was most of all in the hearts of these people, their rescue from the power of death, scenes of deliverance are very frequent in the catacombs; for instance, we have beside those above, Susannah and the Elders, Daniel in the Lions' Den, the Three Children, the Sacrifice of Isaac, the Ark of Noah, the Release of S. Peter from Prison, the Story of Jonah and many others of a like description.

The third cubiculum is particularly rich in these wall paintings. Here we see the Good Shepherd with the sheep on His

shoulders, two figures in the attitude of prayer with their arms outstretched, called "oranti," and birds and angels; while the floor is an imitation of mosaic work. In the fourth cubiculum we have a picture of Moses striking the rock, as again in the fifth. Opposite the entrance is represented a tripod with a fish and bread laid upon it, beside stand a woman and a man vested with the "pallium." This is a symbolic representation of the Eucharist; the woman, in the attitude of prayer, is the Church. Other pictures are also to be seen, much faded. On the flat roof is again the Good Shepherd carrying the sheep with two other sheep at His feet. Close by the Moses in the fifth chapel we see a fisherman taking a fish from the water, a reference, no doubt, to the Sacrament of Baptism and to the Apostles and their successors as "fishers of men." Everywhere the fish is significant, sometimes symbolic of the soul regenerated by baptism, sometimes of Christ Himself. The "pisciculus," the little fish, is the Christian; the "Ichthus," the letters of which signify in Greek the initial letters of the words "Jesus Christ, Son of God, Saviour," is a symbol of Christ.

Passing on again through the galleries we come to a part of the catacomb which was actually the work, as an extension of the Cecilian, of Callixtus. Here, in a square cubiculum with little "arcosolia," Pope Eusebius is buried. The whole chamber was once lined with marble and decorated with mosaic. Farther still is another chamber with two sarcophagi containing the remains of the deceased, and farther still the Crypt of Severus, and then that of Lucina containing the tomb of Pope Cornelius.

But such an enumeration can mean little to the reader, and gives no idea at all of the catacombs, what they really were, or their meaning for those who visited them. They were far more than cemeteries; they were the cradle of Christianity, and the refuge and the home of the Church. There the early Christian took part in his wonderful act of worship. Let us picture such an one, perhaps in the time of the Minor Peace, a little weary after a night journey along the Appian Way and at dawn still some distance from the city, arrested suddenly on his road by that singing Pliny heard. Knowing well its import he would turn out of the way through that narrow door in the vineyard wall of the old villa, follow the path, and coming to that "gap of

Courtesy of E. N. I. T.

THE GOOD SHEPHERD AND THE SHEEP

In a cubiculum of the Catacombs of S. Callixtus is found this mural painting of Christ, pictorially the Christian evolution of the pagan Hermes. In His tender care He is seen bearing on His shoulder a feebler member of His flock. Outside the enclosing circle are found symbolic figures of birds and fish; there are also paintings representing angels.

Courtesy of E. N. I. T.

HOW THE EARLY CHRISTIANS DECORATED THEIR CHAPELS

In one of the six "Chapels of the Sacaraments" in the Catacombs of S. Callixtus is found this very beautiful ceiling. Yet it is hardly exceptional for all the decoration of the tombs is on a high standard. In the corners are figures "oranti" (praying), and the central picture is a symbol of the religion that flourished in these underground churches.

Courtesy of E. N. I. T.

S. CECILIA AT PRAYER IN HER GARDEN

The Crypt of S. Cecilia in S. Callixtus takes its name from the fresco illustrated here which adorns its wall. Above is the saint herself praying among the roses of her garden, and below (left) in a niche once porphyry lined is a figure of Christ; the vested figure on its right is S. Urban. The figure of S. Cecilia dates to the seventh century of our era; those of Christ and S. Urban are of the eleventh century.

blackness" in the grassy hill at the back of the house, so descend by devious, narrow ways lined with the names of those already sleeping—his own friends, perhaps—till he would come at last to the "Church in Lucina's House," to remind himself once more in the early spring morning of the great deliverance.

Amid the sacred readings, in silence at certain intervals or again with bursts of chanted invocations, and from the many prayers and protests of love, little by little, and always with that sense of expectation of someone coming, the dramatic narrative disengaged itself till it appeared with all the vividness of a picture and he seemed to see that Figure towards Whom the whole act of worship was continually turned. Yes, in that world of the catacombs, surrounded by symbols of Hope, one was content with the new Love born into the world, which changed the whole aspect of life, of death, of conduct so marvellously, and made things hitherto difficult and mysterious just a kind of joy. It was indeed a new world that one came upon suddenly in those dark, obscure ways, out of the boisterous, cruel delight of the Colosseum or the ennui of the baths. There, as it were, after the agony of the arena, a new fraternity was born, a new brotherhood of man.

And so the first impression on entering one of these catacombs to-day is altogether of serenity and peace; even the scenes painted there are serene and glad. They do not seem to have been preoccupied by the Crucifixion, the death of Christ; they thought only of the Resurrection. Nor is there hatred or contempt at all of pagan thought or religion. It remains as it were transformed, seen with new eyes, and drawn into the service of Christ; so that Orpheus becomes but a prophecy of Him, here in S. Callixtus; and the Good Shepherd bears the lamb on His shoulders precisely as Hermes had been wont to do, but with a new tenderness. The portrait of Christ is but seldom found, but when we do find a presentment of Him, as in SS. Nereus and Achilleus, for instance, He is represented as young and bearded, with a smile on His lips, splendid as Apollo.

Side by side in these catacombs they lay down to sleep, the rich beside the poor, the bond by the free, to wait in perfect confidence the promised resurrection. Nor have we added much to the rite itself. For the Christians, even in the earliest days, ob-

served the customs of their ancestors, though with a new intention. The ancient rite of Extreme Unction was administered, the dying being literally anointed with aromatic oils and balsams, till in the fourth century the body was merely touched in various places with myrrh. Then, singing the while, they swathed the body in stuffs, often precious, the arms close to the body, the "Funeralia" beginning where death had taken place and coming to an end in the cemetery itself. The ceremony was almost exactly that of a mass for the dead; the same psalms were sung, and the sacrifice followed at the tomb itself. Sometimes, as though for comfort, the divine species would be buried with the dead, but this was forbidden in the sixth century.

There they laid them, one after another, thousand upon thousand, in these subterranean galleries, closing the place carefully with cement and writing above "Dulcissima . . . in Pace," "Vivas in Christo." Often they would return to these silent resting-places, through the long galleries, always full of a far away sound of children's voices singing. And one such, heartbroken in spite of himself, without a single look or a kiss or even a clasping of hands these many days, has written there again and again the name he loved, "Sofronia vivas . . in Christo"—"Sofronia in Domino"—"Sofronia . . dulcis, semper vivas in Deo" —"Sofronia . . ."

THE MASTER BUILDERS. IX

TRIUMPHS OF THE ROMAN BRIDGE BUILDERS

By O. G. S. Crawford

TRIUMPHS OF THE ROMAN BRIDGE BUILDERS

By O. G. S. Crawford

Author of "Man and his Past"

THE history of bridge building is an ironical commentary upon the inconsistency of human nature; for those who have laboured for months and years in building a fine bridge have often destroyed it again in as many hours. Military necessity is generally the cause of both acts. To hold a conquered country good roads are essential even to-day; and good roads involved good bridges. We learnt the importance of bridge-heads during the Great War. But bridges near a frontier may have to be destroyed if that frontier is "rectified" by the people on the other side. In the Middle Ages, when every man's house was necessarily also his castle and his own frontier often lay at his doors, this inherent defect was remedied by making draw-bridges which could be lifted up if need be, the castle or house being then securely islanded within its moat. But such means were impossible when great rivers had to be crossed. Consequently, we find one Roman Emperor constructing a magnificent bridge across the Danube frontier, and his successor destroying it for fear of the barbarians beyond.

There is a curious, but perhaps accidental, resemblance between the evolution of bridge building in England and Italy. In prehistoric Italy, as so often in mediæval England, people lived for safety on artificial islands. In Italy these islands (called "terramare") were made during the Bronze Age in the well watered plains of Lombardy. They consisted of a rectilinear enclosure surrounded by ditches fed with water from a river.

The key to the site was the bridge; if the enemy could capture it, all was lost. We need not wonder, then, that bridges came to be associated with many religious observances, and that a halo of tradition gathered round them. The prehistoric "terramare" folk must have watched many desperate encounters between their own defenders and the enemy at the gates. A bridge-head battle at Rome in rather later times has been immortalised in Macaulay's lay of Horatius who "kept the bridge in the brave days of old." The bridge was a wooden one, the Pons Sublicius; and Horatius with two intrepid comrades held it against Lars Porsena of Clusium while his fellow-citizens were desperately hacking away its timbers. He succeeded, swam back to Rome across the Tiber with all his armour on, cheered by both sides, and was rewarded by a gift of land and a statue erected in his honour. No trace of bridge or statue now survives.

Rome itself was rich in bridges. The Pons Fabricius may still be seen; it united Rome itself to the picturesque Tiber Island and is now called the Ponte dei Quattro Capi, from the four-faced stone heads upon the parapet. It was built just before the beginning of the present era, doubtless replacing a wooden predecessor. In 21 B.C. it was renovated and the inscription recording this fact may still be read upon it with the names of the two consuls responsible for its restoration. Its continuation, leading from the Tiber Island to the right or western bank of the river, was called the Pons Cestius or Pons Gratiani, and is now the Ponte San Bartolomeo. It appears to have been built by L. Cestius in 46 B.C., just after Cæsar's invasion of Britain. In A.D. 370 it was renovated by the Emperor Gratianus. Between the years 1888 and 1892 it was destroyed and a new bridge built in its place. Originally it consisted of a large central arch with a smaller one on each side and its method of construction was similar to that of the Pons Fabricius. Recent discoveries have brought to light some of the huge blocks with which it was built; the iron clamps with which they were bound together can be seen and look remarkably modern. The Pons Salarius crossed the Anio, a tributary of the Tiber, and lay upon the Via Salaria, one of the many famous roads which led to Rome.

But it was on the frontiers of the Roman Empire that two of the most famous feats of Roman engineering were constructed.

Photo by Alinari.

BRIDGE IN ROME THAT CÆSAR MUST HAVE TROD

Linking the left bank of the Tiber with the little island that lies just west of the old Forum Romanum is the Ponte dei Quattro Capi still solid and serviceable in spite of the centuries that have settled thick upon it; for with but little alteration it is the same bridge that was built about 62 B.C., renovated in 21 B.C., and known as the Pons Fabricius. With the exception of the mighty Alcántara bridge in Spain, it is probably the best preserved Roman bridge in existence.

Photo by Alinari.

WORK OF THE BRIDGE BUILDERS IN THE CRADLE OF THEIR CRAFT

In spite of serious damage done to it towards the end of the nineteenth century, and the rebuilding thereby rendered necessary, there is still much of the original masonry of the Pons Cestius in the modern Ponte San Bartolomeo in Rome. It is the continuation of the Pons Fabricius joining the island to the right bank of the Tiber; built about 46 B.C. by L. Cestius, it was renovated in A.D. 370 by the Emperor Gratianus and thenceforward called the Pons Gratiani. Still well preserved, too, is the Pons Ælius (Ponte Sant' Angelo) built by Hadrian in A.D. 134.

"THIS BRIDGE GREAT LACER BUILT WITH WONDROUS ART TO STAND UNMOVED THROUGH ALL ETERNITY"

Because it has been many times restored and repaired but never really altered in character or material, the wonderful Roman bridge over the Tagus in the Spanish province of Cáceres remains the most perfect in existence; even the original pavement is intact. Built of great unmortared blocks, it is 617 feet long and consists of six arches of which the two central ones have a span of about 100 feet and are more than 180 feet above the river; over the central pier is a triumphal arch. The town near by owes its name to it, for Alcántara is but slightly altered from the Arabic El Kantara. From an inscription on a neighbouring temple ruin we learn the name of the architect: "Pontem perpetui mansurum in sæcula mundi Fecit divina nobilis arte Lacer"—"This bridge great Lacer built with wondrous art to stand unmoved through all eternity." The temple was dedicated to Trajan, so Gaius Julius Lacer must have laboured at the end of the first century A.D.

Photo by Mr. F. Stanbury, by courtesy of the Royal Geographical Society.

SPANNING A ROCKY TORRENT IN MAJORCA: BRIDGE AT POLLENSA

At Pollensa on the north-east coast of the island of Majorca in the Mediterranean is found this monument raised by the Roman builders. The ancient Pollentia was the first colony founded in Majorca and the site abounds in remains. Details of construction are interesting in this bridge; the pier is not built in the middle of the river, but where its foundations have a firm bed, and the arches are therefore unequal in span; above the pier is a small arch that takes away from the enormous weight of the masonry at the junction of the larger arches; the material used is large stones, unpolished save in the facings of the arches.

They crossed the greatest rivers in Europe, the Danube and the Rhine, and neither of them had a long life. The Danube bridge was built by the Emperor Trajan in A.D. 104-5, in the interval between the first and second Dacian wars. It stood below Orsova and the Iron Gates, one of the great strategic sites of Europe, where the Danube pierces the narrow mountain ridge that separates the great plains of Hungary from those of Rumania; here, before the Great War, converged the frontiers of four nations: Hungary, Serbia, Rumania and Bulgaria. A whole army worked for a year to build it. The architect, Apollodorus, also constructed the Column of Trajan upon which he has left a bas-relief sculpture of the bridge. We also know what it was like from numerous coins bearing representations of it and from descriptions by the architect himself, quoted by Procopius and by Dio Cassius.

The greatest difficulty encountered was in laying the foundations for the piers in the bed of the river. It was of course impossible to deflect the river temporarily—a masterful course occasionally adopted. Twenty piles were driven in. The bridge was about 1,200 yards long and between 14 and 20 yards wide; each end was fortified. The arches had a span of between 37 and 40 yards. The arches and parapet shown on Trajan's Column are of wood; but possibly this representation shows it before it was quite finished. Some authorities have supposed that it was intended to complete it throughout in stone, replacing the wooden parts by stonework on similar lines of construction. However this may be, its life was short. Hadrian removed the platform of the bridge in case it should be used by the barbarians outside the pale. It was temporarily restored by Constantine in A.D. 328 and some of the pillars are still standing. The architect's design has lasted longer than the great work itself. It may be seen upon that Column of Trajan which stands in Rome near the great tramway centre so familiar to all visitors—a strange relic of the former greatness of Rome and an invaluable store of knowledge for the historian.

The Rhine bridge was built by Cæsar, but it was only temporary. His motives for crossing the Rhine at all are interesting; he himself gives many reasons. One of them was to show that he could do so and thereby enhance his prestige, already great,

amongst the Germans on the other side. He wished to show that if the Germans regarded the Rhine as the frontier of the Roman Empire, they must stop raiding the tribes living to the south-west of that river. Accordingly he determined to cross; and as he considered it undignified to cross in boats—he says so himself—he had a bridge made. He began by joining together two piles, each a foot and a half thick, sharpened at the end and proportioned in length to the depth of the river. These were driven into the bottom with rams, but at an angle and not perpendicular. Opposite these, forty feet lower down, two others were driven in, slanting up stream. Beams were laid horizontally across these. This was an ingenious device, for the force of the current against the upstream piles merely resulted in driving the other piles more firmly into the bed of the river. Upon the horizontal beams others were laid parallel to the direction of the current, and covered with lathes and hurdles to form the roadway. In addition, piles were driven obliquely into the river below the bridge, to buttress it against the force of the current. Similar piles were also driven in above, to take the impact of any trees or boats that the barbarians might float down the river to destroy the bridge. The whole work was finished within ten days, and the army crossed. Cæsar left a strong force at each end to protect it, and marched forward into the territory beyond. Needless to say, the bridge has now disappeared and even its exact site is unknown, but a representation appears on Trajan's Column.

The Rhine was crossed by two other Roman bridges, both of which have disappeared. One at Mainz was constructed in the early days of the Empire—probably in the reign of Augustus. It was frequently destroyed and rebuilt. A view of it is given on a leaden facsimile of a gold medal, now in the Cabinet of Medals at Paris, bearing the heads of Diocletian and Maximian; it seems to have been an imposing affair with a huge fortress at one end. The other bridge was at Cologne and was made by Constantine about A.D. 308. Vestiges of wooden piles were found in 1864 at Coblenz (Confluentia). Here, as the Roman name implies, the Moselle joined the Rhine; and it was over the former river that the bridge was made, probably in the fifth century A.D. It is significant of the unalterable laws of geography that these three bridge-heads should have been selected as the headquarters

From a photo by Mr. Douglas Carruthers, specially coloured for "Wonders of the Past" under his supervision; by courtesy of the Royal Geographical Society.

CARRYING A ROAD IN A FAR-FLUNG OUTPOST OF THE ROMAN EMPIRE: JISR-EL-MUJAMIYEH

About seven miles south of the well known Lake of Tiberias in Palestine, crossing the river Jordan at a place where its banks lose their clear-cut definition and become almost a veritable morass, stands this great structure of the engineers of Rome, known in modern times as "Jisr-el-Mujamiyeh." The exact dating of its erection is uncertain. One is particularly impressed by the structural details of this bridge —its sweeping semicircular arch and the smaller arches seen on the right built no doubt to lessen the resistance offered by the structure when the river was in flood. Notice, too, the small arches just under the parapet that decrease the weight of the heavier right side on the supporting masonry.

of the principal victorious armies when, 1,600 years later, it became necessary to restrain Teutonic enterprise.

One of the largest single-arched bridges known is that over the River Elaver (now Allier) in France. It was called Pons Veteris Brevatis, and stood near the city of Brioude (Brivas) in Auvergne. The pillars stand on two rocks 195 feet apart and the arch is 84 feet above the river. The name is interesting. An old glossary of A.D. 449 gives the Latin translation of certain Gaulish words: "brio" is translated "ponte," and "doro" as "ostio." Now these two words, "brio" (bridge) and "doro" (gate), enter into at least two place names in England. The Roman name of Rochester was Durobrivæ and another place of the same name stood close to Peterborough. The prefix "duro" appears almost to have meant "town," though strictly it means "gate," and is connected with the Latin "forum" and English "door"; and the suffix "briv" implies that the river there was bridged. It is known that a Roman bridge must have existed at Rochester on the site of the present bridge, for here Watling Street crossed the Medway on its course from Canterbury (Durovernum) by Durolevum (near Faversham) to London. "Briv" is etymologically connected with our word "bridge"; it appears in France in the name Briva Isare (Bridge of Isara), whose modern name Pontoise is a literal translation of the old one.

A Roman bridge at El Kantara in Algeria carried the road from Lambessa to the desert south of Biskra; it was badly restored in 1862. At Constantine, also in Algeria, are two other bridges. The first, of which two abutments only survive, must have been built in three stages, one of a single arch, the other two above of several arcades. The second, on the site now occupied by the railway leading into the town of Constantine, was 70 yards above the torrent bed, 65 yards long and 8 yards wide, and it made use of a natural arch over the Rummel. The date of its foundation and destruction are both unknown.

The most remarkable of the many remarkable remains in Spain is the bridge of Alcántara over the Tagus (the name means "bridge" in Arabic). It was built between A.D. 98 and 106, the cost being borne by the Lusitanian municipalities; the architect was Julius Lacer. The roadway passes under a triumphal arch which is standing, and is about 180 feet above the river. It is

supported by six unequal semicircular arches, the two central ones—the largest—having a span of about 100 feet. Even the original pavement is still intact as it was more than 1,800 years ago, and since then not a day has passed but someone or other has used the bridge. How many people have crossed it since it was first made? A simple calculation (purely speculative, of course, but based on reasonable estimates) will suggest that during its existence the number of wayfarers using it must be equal to the whole of the present population of the world! What would Julius Lacer have thought could he have known that his work would be of direct personal assistance to four hundred million people?

Britain was not without bridges built by Roman engineers during the time when the country formed part of the Roman Empire. Many of these must have been of wood, for they have vanished without leaving the slightest trace. Remains of others survived down to modern times. One such over the North Tyne at Cilurnum (Chesters) on the Roman Wall of Hadrian was described in 1725 by Stukeley as a "wonderful bridge of great art, made with very large stones linked together with iron cramps fastened with molten lead." The foundations were described by Horsley in 1732 as "yet visible"—indeed they still remain so and are illustrated facing page 771. The abutment on the east side is particularly well preserved, and a plan of the whole existing remains was made and published by Messrs. Elliot and Wilson (Archæologia, 1782, Vol. VI, p. 80). According to Mr. Clayton, "the whole span of the bridge . . . is 180 feet. There are four openings between the piers, and the space between each . . . is 35½ feet." The Tyne was crossed by bridges at Corbridge (Corstopitum), one of the bases behind the line of the Wall, and at Newcastle (Pons Aelii), where some fragmentary remains still exist.

London Bridge was built by the Romans, but the site of the Roman bridge was 200 feet east of the present one. To it converge Roman roads from both sides. From the north comes the Great North Road, and from the south Stane Street from Chichester (Regnum), and Watling Street from Canterbury and Dover. A recently discovered Roman road along the north part of the present Kent and Surrey boundary probably converged

Photo by Mr. James Jackson, by courtesy of the Royal Geographical Society.

TIME-DEFYING ARCHES OF A ROMAN BRIDGE IN THE SPANISH TOWN OF SALAMANCA

As early as 222 B.C. we hear of an ancient town, Salmantica, in the centre of the Spanish peninsula; it was captured by Hannibal and subsequently passed to Rome. To-day that town is the old university seat of Salamanca in the western province of Spain of the same name; and among its other memorials of the past it can boast a fine bridge of twenty-six arches more than half of which—fifteen to be precise—are of Roman work, while the remainder are sixteenth century. The total length of the bridge is 500 feet, and the river which it spans is the Tormes. This photograph is taken from the left bank of the river looking towards the New Cathedral—"new" although begun in the year 1509.

THE RIVERS OF ASIA MUST SUBMIT TO ROME

Far away on the frontiers of empire the Romans flung their bridges across stream and river, and so well did they build that some of them to-day are still in use. Thus on the military highway to Batum (the ancient Batis) by the eastern shores of the Black Sea this bridge that once rocked and echoed beneath the steel-shod tread of the legions proved of use to Russian troops in the twentieth century. It was constructed by Vespasian, the Roman Emperor who reigned from A.D. 69 to 79.

on the same point as well as other roads from the south coast whose course is still uncertain in parts. London Bridge must have been an imposing feature. By a strange freak of fortune the first picture of it has been discovered in France.

> In rebuilding the ruined central streets of Arras in this year (1923) an immense hoard of fourth century Roman gold medallions was found. One of them (Sir Charles Oman has been informed) was a large gold medallion of a type hitherto unknown, representing Constantine the Great entering London, with a view of the Thames, and a bridge over which the Emperor is riding. The inscription, "Adventus Aug. Lond.", fixes the fact that it is London which is intended to be figured. . . . It is (Sir Charles continues) absolutely the first coin . . . which has come to hand to illustrate the fact that London was, in the days of the Roman Empire, not merely a large provincial town, but the official head of the great "dioceses" of the fourth century Empire, on a parallel . . . with Treves, Carthage, Siscia or Antioch. While coins were known which illustrated all those cities, none such celebrating London had ever been discovered till now.

The foregoing is quoted from a report of Sir Charles Oman's presidential address to the Bristol and Gloucester Archæological Society given in the "Evesham Journal" of September 15, 1923. We shall look forward to hearing more of this most interesting find, and only regret with Sir Charles that it will be stored in Paris and not London, its proper home.

The later history of London Bridge is interesting. There is a complete gap in our knowledge until the year 1013, when it is recorded that the Danes destroyed it. Then we learn that between the years 1176 and 1209 another bridge was built by a certain Peter of Colechurch. It was in the line of Fish Street Hill, and was borne on twenty arches.

Probably the crossings of smaller rivers were by paved fords. One such near Hemsted Park in Kent was discovered by the writer and Dr. Simmons; it consists of large flat stones placed upon a wooden substructure in the clay bed of a small stream. The spot is a lonely one, and it now lies away from all the main lines of traffic, buried in the heart of the Weald; doubtless it owes its survival to this isolation. Other paved fords may still exist along the lines of Roman roads; we would expect to find them

in a region like the Forest of Dean where iron was smelted and Roman roads were numerous; otherwise, ferries probably served. It is noteworthy that where Roman roads pass near the coast they often deliberately avoided crossing tidal estuaries, choosing a spot just above the high water mark of ordinary tides. Those great bridge builders of the past did not wish to make their task more difficult than was necessary.

Photo by Mr. A. P. H. Hotz, by courtesy of the Royal Geographical Society.

MONUMENT TO THE SHAME OF ONE OF HISTORY'S MOST TRAGIC CHARACTERS

The tragic story of the Roman Emperor Valerian is mentioned in the text and his no less tragic figure shown in the vainglorious rock relief of the Sassanid monarch Sapor, his conqueror. The subsequent tale of his captivity, a long degradation that did not end with death since Sapor caused his skin to be stuffed with straw, can scarcely be called historical; but there is no reason to doubt that he was forced to labour on the construction of this mighty bridge that spans the Karum at Shuster, a town some 30 miles east of Susa and capital of the Persian province of Arabistan. In any case the architectural traditions of Rome had penetrated to Persia, although these pointed arches are less Roman than Persian in appearance.

Photo by Mr. A. P. H. Hotz, by courtesy of the Royal Geographical Society.

WORK THAT ENDURES: A BRIDGE IN DISTANT PERSIA

Taken from the top of the bridge-gate building when the Karun was running fuller, this photograph shows the opposite end of Valerian's bridge to that in the previous page; the gap in mid-channel there visible in the centre may here be seen in the right distance. But for that gap which might so easily be spanned, the bridge would still be almost as fit for use as ever it was; and it must have been built not many years after A.D. 260, sixteen and a half centuries ago.

Photo by Major A. W. D. Bentinck.

SO STABLE THAT THE SUPERNATURAL IS INVOKED TO EXPLAIN IT

A noble Roman bridge crossing a tributary of the Tigris at Zakhu, a village in Irak about 80 miles south of Lake Van, has become known in course of time as the Bridge of Alexander, that universal hero in the East, and the following legend is to-day related of it: in spite of repeated attempts the central span would not hold, until in obedience to prophecy a virgin was immured above the keystone; that done the bridge has stood firm to this very day.

By permission of Thos. Cook & Sons.

NO LAND SO WILD THAT IT DAUNTED THE PIONEERS OF ROME

The wildest scenery in which a Roman bridge is set is to be found in Algeria at a spot called El Kantara, which is simply Arabic for "The Bridge." It bears the old southern road from Lambessa across a narrow gorge amid grand and barren hills; and although a restoration, rendered necessary in 1862, took no pains to preserve its Roman character, it still owes its old strength, its stubborn utility, to the thorough workmanship of builders who learnt their craft from the Mistress of the West

TEMPLES OF THE GODS. XIX

THE GREAT DAGOBAS OF CEYLON

By G. E. Mitton

THE GREAT DAGOBAS OF CEYLON

By G. E. Mitton

Author of "The Lost Cities of Ceylon"

THIS article should be read in connexion with the contribution by the same writer on "The Lost Cities of Ceylon." As was the case with "The Sacred Shrines of Buddhism," it is included under the sectional heading of "Temples of the Gods" for the convenience of editorial arrangement; for while dagobas are certainly sacred to Buddhists, they are relic shrines like the stupas in India, or commemorative monuments, and not in the strict sense of the word temples. A map indicating the position of the chief dagobas is given facing page 497.—Editor.

ONLY after the diffusion of Buddhism did the custom of burying supposedly sacred relics under vast mounds of bricks become popular. The pagodas of Burma, which are, perhaps, the best-known examples of this sort of relic shrine, are usually bell-shaped, rising into a spire and capped by a "hti" (tee) or umbrella, hung with bells which tinkle in every wind. The Siamese pagodas are very much fined out, and have no umbrella, and in a general way suggest the architecture of the Angkor Vat in Cambodia. The Chinese pagodas are more towers than anything else, and keep practically the same breadth to the summit, like a square and highly decorative factory chimney.

Far less known than these are the rounded masses of millions of bricks found in Ceylon, and called "dagobas." There are indeed piles, somewhat similar, in India, where they are called "topes," such as the great tope at Sanchi, and the evolution of these has probably been by way of the tumulus.

The word pagoda came to us from the early European adventurers in the East, and is not Indian like dagoba, stupa and tope. Dagoba means relic receptacle, but it is not by any means certain that all of these gigantic piles were relic receptacles; in

fact, evidence suggests that some were merely commemorative monuments.

The best known, though not the largest of them, at the ancient city of Anuradhapura is most certainly a relic shrine. That exceedingly valuable national chronicle, the "Mahawansa," gives us an obviously authentic, if somewhat highly embroidered, account of the way in which this splendid monument came into existence. It appears that the form was not in any way copied from already existing examples in Southern India, but was evolved independently on the spot.

King Dutugemunu (101 B.C.), having obtained a collection of relics of great sacredness, asked the bricklayer what form the proposed shrine should take, and he, dashing his hand into a golden pot full of water, pointed to the bubbles that arose and floated on the surface. Whether this is true or not, a floating bubble gives a curiously exact outline of what these piles must have been like when first built. Though the bricks have settled and sunk, and in some cases there have been disastrous landslides, yet we have still existing some huge bubble-shaped domes rising to startle us by their dimensions and unusual shape.

During the ages when the cities of Ceylon lay desolate in the jungle, these rounded elevations were rapidly clothed with bush and scrub, like the rest of the ruins of temples, tanks, pavilions and other remains. Huge roots as thick as a man's thigh worked themselves insidiously in between the bricks and clamped themselves to the interior work; the ever grasping ficus sent down its octopus-like branch-roots and clutched the masonry in its tentacles, so that when the cities were rediscovered and restoration set to work about the end of the nineteenth century, it was found impossible to eradicate them altogether. Much was cut away, but to wrench out such roots would have been to cause a landslide.

Such a catastrophe has occurred, indeed, in the case of Ruanweli, the most sacred of the larger dagobas. This is certainly a true relic shrine for it had a secret chamber in the interior into which none but monks were permitted to penetrate. The dagoba is now angular or triangular in outline, and capped by a modern copper spire. It is one of the Eight Sacred Places of the Buddhist community in Anuradhapura, and is therefore not under the control of the Archæological Commissioners. It was originally

Ceylon Government Photo.

KIRI, THE MILK-WHITE DAGOBA, STILL IN THE JUNGLE'S GRIP

Here is one of the only two large dagobas remaining at Polonnaruwa. The ficus trees had grown over it and thrust down their roots, sometimes as thick as a man's thigh, into the cracks in the pure white coating of chunam which once covered the dome. It was from this marble-like exterior that the name arose. To-day, with infinite patience, the growths which were slowly tearing it apart have been removed, and the dagoba stands cleared, a rather melancholy object, it is true, but saved from destruction.

ABHAYAGIRI, SECOND OF THE MIGHTY MONUMENTS AT ANURADHAPURA

This dagoba has retained the evenness of its outline better than any of its fellows. It is second in size of the three great stupas. A new brick erection built by the monks on the summit now replaces the truncated steeple, and it is possible to climb to this by a steep path. From the summit the other two dagobas rivalling Abhayagiri can be seen rearing themselves above a sea of jungle. On the stelæ found on the platform are unusually perfect carvings.

JETAWANARAMA DAGOBA, THE LARGEST OF ITS KIND NOW EXISTING

Jetawanarama, a gigantic hill of bricks at Anuradhapura now covered with jungle growth, rises to a height of 240 feet and was originally much higher. It rests on a platform 100 feet wide, and was built about the end of the first century B.C. It is the largest of all the dagobas known to exist. The pillars of the ruined entrances to the processional platform can be seen in the photograph also the dwarf guard-stones and the stone vases surmounting the pedestals on each side.

AMBUSTALE DAGOBA ON THE SACRED MIHINTALE HILL

Eight miles from Anuradhapura, high up on the sacred hill of Mihintale, the Ambustale Dagoba stands on the very spot where King Tissa, two centuries B.C., met the apostle of Buddhism and became converted to that faith. Flights of well worn stone steps, fringed by maiden-hair fern, lead up beneath the steep hillside to Ambustale surrounded by dark groves of palms. The monks who tend the sacred spot shelter in the caves of the rocks, over the entrances of which droops the gorgeous hibiscus.

Photo by F. Deaville Walker.

THUPARAMA, IN WHICH IS ENSHRINED THE COLLAR BONE OF THE BUDDHA

Though small in size, Thuparama, at Anuradhapura, is one of the most sacred among the dagobas because it enshrines the collar bone of the Buddha which it was built to cover in the reign of King Tissa (247–207 B.C.). The present shell is nineteenth century work, but the ancient core and the circle of graceful shafts that stand on the platform invest it with peculiar attraction. No one has yet probed the meaning of these slender granite columns capped by exquisite carvings of dwarfs and sacred geese in life-like action.

120 cubits, or 270 feet, high—a Ceylon cubit being reckoned as 2 feet 3 inches—and is now about 178 feet, rising from terraces laid with limestone blocks.

At the foundation the king placed eight golden and eight silver vessels and eight bricks made of gold and many bricks of silver. Thus, its name of Ruanweli (gold dust) was well earned. On the top of these was laid a heap of perfumed flowers blessed by the chief abbot. Among the deposited relics was placed a golden figure of the Buddha decorated with precious stones. Upon a solid foundation, beaten down by the feet of elephants enclosed in leathern pads, was reared this mighty "drum," made, so far as we can judge now, of equal diameter and height. It originally stood like its fellows on three plinths or procession terraces, together 15 feet high, the paved platform being about 470 feet across. The retaining wall was set with elephants' heads facing outwards; these were covered with the white lime called chunam which shone like marble, and each had a pair of real ivory tusks. Only a few of the brick cores remain.

Altars, or thrones, for the Four Buddhas of this world cycle stood against the drum on the terraces, facing outwards at the four cardinal points. These were richly carved in string courses and had three wings. Something of the same kind may be observed elsewhere; in the famous Pagan temples the Ananda has four shrines at the cardinal points with presentments of the four Buddhas. There were guard houses at the approaches, one of which (restored) remains. The grandeur of Ruanweli still makes an appeal in its decay, though marred by hideous flimsy erections of modern Sinhalese taste on the platform. But at its perfection, when covered, as we are told was the case, by one king with red clay into which were stuck fragrant flowers until it resembled a gigantic nosegay, or crowned with a jewelled tee—another king throwing over it a "net covered with diamonds"—it must have been a resplendent object.

It was not quite completed when Dutugemunu, after a reign of twenty-four years, lay dying, and was carried out to a granite slab to rest his eyes on this and the Brazen Palace, his proudest works. His devoted brother had had a framework made to cover the uncompleted dome, and over this was thrown a great cloth to resemble a finished whole.

Greater even than Ruanweli are the two giants of the jungle, Abhayagiri and Jetawanarama. By a curious accident, at some date in their past history the names of these two got transposed, as is now fairly substantiated; thus Jetawanarama, which is now the highest (249 feet, counting the steeple), was that magnificent pile of 180 cubits (405 feet) built about 88 B.C. by a set of monks in rivalry with those of the Sacred Bo-tree. This great dagoba was handed over to the Buddhist committee in 1909 on certain conditions, one of which was that no trees were to be felled, as expert opinion considered this would endanger the structure. However, the conditions were not observed, and in the following year the Archæological Commissioners had to step in to prevent further destruction.

Sir Emerson Tennent, writing of this dagoba, made the following computation: "The materials are sufficient to raise 8,000 houses, each with a 20 foot frontage; they would construct a town the size of Ipswich or Coventry."

This presumably refers only to the bricks, but the enormous stone blocks on the surrounding processional platforms must also be reckoned in the material and labour. The steeple and tee are very grand, and wrought with bold mouldings. Tradition says that a large disk on each side was once covered with sparkling gems, after the manner of the "htis" of the Burmese pagodas. The diameter of this drum is now 360 feet, not so far below what it was originally in height.

The steeple of Abhayagiri (so-called) was ruinous, and rebuilt by prison labour in 1890. It is possible to ascend to the summit by the winding path left by the workmen, and from an elevation of about 230 feet (from the platform) survey the surrounding country. The most striking objects are the domes of the two sister dagobas rising from a sea of dark green foliage like rocks in a bay. Elsewhere there are stretches of green cleared land, and glimpses of the enormous lakes, or tanks as they are called, for the storage of water.

It has been reckoned that if the dome of Abhayagiri was carried down to ground level it would be exactly hemispherical. The total area enclosed by the outer boundary wall is 11 acres. The oldest topes seem to have been always dome-shaped, usually something less than a hemisphere, thus approximating closely to

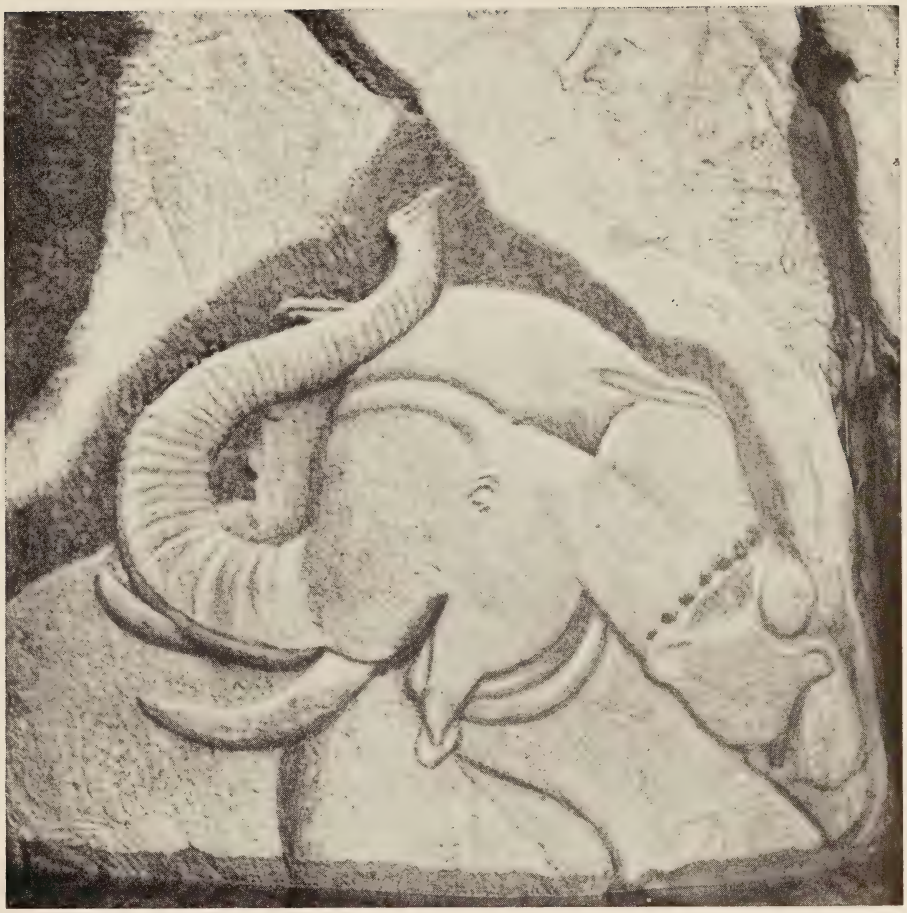


Photo by Mrs. Maynard.

CARVING OF UNUSUAL VITALITY AT ISURUMUNIYA

In depicting elephants the ancient Sinhalese have no rivals. This splendid head is cut in relief on a sheer rock face arising from a deep pool at the rock temple of Isurumuniya. The work must have been carried out under exceptional difficulties owing to the position. The temple lies about a mile outside the great ruined city of Anuradhapura.

the floating bubble, with base circular, quadrangular or polygonal.

By an interesting calculation it has been shown that the apex of the third pyramid at Gizeh would fall within the steeple of Abhayagiri, and its angles at the base coincide with the angles of the drum. The stone-paved platform is decorated with altars, now ruinous, and some very finely carved many-headed cobras on stelæ or panels. The carving on the uprights is unusually good, one showing a female figure. The great flights of steps at the entrances are 27 feet wide, thus making an open approach which enables the platform to be seen.

The only thing in Burma comparable with these massive piles is the Myinmu pagoda on the banks of the Irrawaddy River, and this, though a huge pile of bricks, is shapeless, and not hemispherical. It has round the base an elaborately carved stone railing, like that of the famous Sanchi tope in Central India.

The only other dagoba at Anuradhapura which is large, though not comparable in size with these, is Miriswetiya, a name explained by the story that the king (Dutugemunu) who built it did so as an atonement because, in his greed to devour a chilli-curry (Miriswetiya) of which he was particularly fond, he forgot to make his usual offering of a part of it to the monks. Miriswetiya is a mere shell, and its dome has completely gone. The two enclosing walls afford a home to an innumerable company of bats, who, to the delight of visitors, fly out about dusk every evening like twisting clouds of spray or smoke. The walls are 101 feet in diameter, but only 82 feet in height now. The altars or thrones are unusually well preserved.

At the later city Polonnaruwa, the capital from the ninth to the thirteenth century, the dagobas have lost their attractiveness of outline. We are told that Parakrama, the great hero-king of the twelfth century, built no less than 101 dagobas at this place, but the only two that survive with any completeness are the Rankot dagoba and the Kiri or milk-white dagoba. The former is said to have been due to Parakrama's second queen. It is about 200 feet in height and 180 feet in diameter. It was once crowned by a golden umbrella, thus recalling the "htis" of the Burmese pagodas. Its present tee or crown is in good con-

dition, and has figures outlined upon it. A great deal of cutting and tearing out of giant roots had to be done here in 1905-6.

The Rankot dagoba has shrines at the cardinal points and eight smaller ones in pairs between, a special feature. Both it and the Kiri dagoba, which is about half the height, are stilted drums, higher than their base diameters, and thus they lose impressiveness. The latter gained its name from being covered with chunam, which gleamed like marble from afar.

The dagobas already mentioned all belong to one type, though varying in size. There is another sort, much smaller and more bell-shaped, which has as a distinguishing feature many pillars on the platform. The principal one of this kind is Thuparama, only second to Ruanweli in its sanctity, for it was built to enshrine the right collar bone of the Buddha in the reign of King Tissa (247 B.C.). It was originally only 33 feet in height, and of an inverted basin shape, but surmounted by a conical steeple of such large dimensions in proportion to the drum that it carried on the lines. It was rebuilt by devotees in the nineteenth century and now rises to 63 feet and is much more bell-like than at first.

Seen from a good distance it suggests, indeed, a pagoda rather than anything else. It stands on a high platform reached by flights of wide steps, with door guardians in attendance. Its charm lies in the collection of beautiful granite columns which surround it. These are in four rows at varying distances from each other, and the columns in each row vary in height from 24 feet to 14 feet 6 inches. The shafts are monolithic, and the capitals beautifully carved with designs of capering dwarfs, sacred geese and, in the case of some, carved fringes 14 inches deep embracing the shafts. They are arranged in quadrants to allow of entrance, and many are surmounted by a boss or pad. It seems impossible they could at any time have carried a roof. To begin with, they are too slender and not high enough. They have provoked much conjecture, and it is imagined they may have been used to hang festoons of flowers from, or to support the paintings of the Buddha's incarnations carried about on festival days. Another dagoba very similar in dimensions to Thuparama, and with similar columns, is Lankarama.

About eight miles from Anuradhapura the hill of Mihintale

rises to a height of about 1,000 feet. Up the sides of this hill are long flights of stone steps set by pious kings of bygone ages to aid pilgrims in their ascent. Fringed by maidenhair fern, and grand in their straight simplicity, these outdoor staircases are very impressive. It was on this hill that King Tissa was hunting the elk when he met the apostle Mahinda and was converted to Buddhism with all his followers. The spot on which this historic meeting took place is now occupied by the Ambustale dagoba, which rests on a platform about three-quarters of the way up the hill. It is a kind of hollow amid steeply rising rocky eminences. This dagoba is also of small size, and is surrounded by columns, but they lack the grace and finish of the Thupurama or Lankarama columns. The monks in attendance live in gloomy rock-hewn dwellings amid the limestone boulders close by.

High above it, and above the palm groves on the steep hillside, set like a wen on the topmost eminence, is the Et Vehera dagoba, built over a hair which grew over the left eyebrow of the Buddha. This is a mere tumulus. It is about 90 feet in height, and is approached by flights of steps. On the southern side the granite cliff falls sharply to the plain.

THE ROYAL PALACES. VII

NERO'S GOLDEN HOUSE AT ROME

By Thomas Ashby, D.Litt.

NERO'S GOLDEN HOUSE AT ROME

By Thomas Ashby, D.Litt.

Director, British School at Rome

THE Golden House of Nero was proverbial among Nero's contemporaries for its enormous size and for the great extent of ground that it covered. And yet the original idea of Nero was simply to connect the imperial palaces on the Palatine with the extensive gardens on the Esquiline which, beginning with the gardens of Mæcenas who left them to Augustus, had in one way or another become part of the Imperial domain. The connecting link was to have been a mere passage —the "domus transitoria" it was called; we do not know how much progress was made with the work, but it was the fire of July 18, A.D. 64, that destroyed it, and thus gave Nero the opportunity of enlarging his scheme. One of the two palaces on the Palatine, that erected by Claudius on the southern summit, if not both, lay in ruins. Whoever was responsible for the fire, it certainly gave the Emperor the opportunity which he wanted, though it has recently been pointed out that if it was the work of incendiaries, even if they were suborned by Nero himself in order to incriminate the Christians, a full moon night, as July 18 has been calculated to be, was the worst possible occasion to have chosen. But in any case, Nero was only too glad to use the Christians as scapegoats and subjected them to the cruellest tortures. Tacitus' account is too well known to need repetition here, and it is rather our task to see what use Nero made of the chance that presented itself.

As we have seen, what struck the ancient writers most was the enormous size of the Golden House, of which Tacitus speaks

as if it occupied more than half the city, while Suetonius quotes an epigram which runs: "Rome is becoming one house; off with you to Veii, Quirites!—if that house does not soon seize upon Veii as well." Rhetorical exaggeration apart, it did actually occupy an area spreading over parts of the Palatine, the Velia, the Esquiline and the Cælian, and over the low ground between these hills. It has been calculated, indeed, that it extended over nearly double the space which is now taken up by the Vatican palace and garden and S. Peter's, including the Piazza. An American archæologist, Miss E. B. Van Deman, has pointed out that the approach to it was formed by a series of great colonnades which began in the neighbourhood of the Basilica Æmelia and the Temple of Vesta, and ran right up on each side of the Sacra Via to the ridge of the Velia, which connects the Palatine and the Esquiline. Only the massive concrete foundations of this building can now be traced, but they are sufficient to show that it was to Nero that the whole of this part of the course of the Sacra Via, which lies just outside the Roman Forum proper, and the buildings on each side of it owe their orientation and arrangement.

The Sacred Way was thus made to lead up to the vestibule of the Golden House situated on the Velia, and beyond this point it became a private road along which in Nero's day no traffic was permitted. The centre of the vestibule is marked, more or less, by the façade of the church of S. Francesca Romana, formerly known as S. Maria Nova, erected on the platform of the twin temple of Venus and Rome built by Hadrian in A.D. 121. The massive platform of Hadrian's temple has so completely blotted out the remains of the vestibule of the Golden House that nothing can be said of its original form. An ancient writer (Suetonius) tells us that in the centre stood the colossal statue of Nero himself, 120 feet high.

From the Velia a branch road ascended to the Palatine, but here we have but little trace of Nero's activity. His fire had laid waste the Palace of Claudius on the south-eastern summit, and he seems only to have begun its restoration; while that of Tiberius and Caligula on the north-west summit, though it may not have been burnt down until the fire of Titus in A.D. 80, was not apparently included in Nero's main scheme at all. He turned

Photo by Alinari.

SUBTERRANEAN MASONRY OF A GREAT EMPEROR'S PLEASAUNCE IN THE CENTRE OF ROME

Tacitus, the great Roman historian, employs the sharp reproof of his trenchant pen to describe the far-spending buildings which Nero raised, and speaks of the "tilled fields and rural solitudes" of the gardens. In these gardens stood colonnades, the arched substructure of one of which is shown; only that part of the walls in the immediate foreground belongs to Nero's Palace—the rest is part of the later Baths of Trajan, until recently known as the Baths of Titus. In the centre background is a fountain.

Photo from Dr. Ashby.

SEA-SHELL DECORATIONS IN NERO'S CONSERVATORY

When Nero, profiting by the more than fortuitous conflagration of A.D. 64, was able to give full rein to his gargantuan schemes for a splendid palace in the heart of Rome, he built without scruple over the remains of previous great buildings; so, in later days, did other emperors without compunction obliterate his Golden House. Above is shown the "Nymphæum" or conservatory, an off-shoot of the main building discovered when the new street, the Via dei Serpenti, was being constructed, and partly obscured by its embankment. The walls are adorned with sea-shells, and have niches that once held statues.

his attention indeed in a different direction, and placed his main palace on the Mons Oppius, one of the outlying spurs of the Esquiline. Here he caused to be erected by his architects, whose names, Severus and Celer (they were doubtless imperial slaves), are known to us, a palace which for luxury outdid all its predecessors. We also know the name of the painter who, no doubt with the help of numerous assistants, executed the pictorial decoration. Pliny tells us that "not long ago lived Fabullus, whose style was lively, while dignified and severe. He painted only a few hours a day, and that with dignity, for he always wore a toga, even on a scaffolding. The Golden House was the prison of his art, and for that reason very few other works of his exist." The greater part of it is still preserved to us under what have recently been ascertained to be the Baths of Trajan. Previous to 1895 they were always known as the baths of Titus, but in that year Lanciani discovered a plan by Palladio of the real Baths of Titus—a much smaller building immediately opposite the Colosseum.

The remains of the main palace of the Golden House have been known since the early Renaissance, when the paintings which decorated them were studied by the artists of the time. We have the actual signatures of many of these, among them perhaps that of Pinturicchio, certainly that of Giovanni da Udine, the assistant of Raphael, in the Loggie of the Vatican, the Villa Farnesina and the Villa Madama. Vasari indeed tells us, in his life of Giovanni, that he was one of the first to visit, with Raphael, some newly discovered rooms belonging to the Golden House, and that after repeated visits he discovered the composition of the stucco of the ancients; and Raphael was so delighted that he entrusted Giovanni with the decoration in stucco of the vaulting of the Loggie, on which he was then engaged. There is, indeed, no doubt that the decorations of the Loggie owe much to those of the Golden House.

From the fact that these ancient paintings (all of them on a small scale, with little figures either painted or in stucco relief, often with stucco framing) were found in rooms or grottoes as they then seemed to be buried deep underground, they were known as "grottesche," and as the subjects and the treatment of these little scenes were alike fantastic, the word "grotesque" acquired its modern meaning.

These rooms were visited at intervals during the succeeding centuries, but then rather by antiquaries and painters who were interested more in the paintings themselves as archæological documents than for any practical use that they could make of them in their own works. A certain amount of excavation was undertaken, and in 1811-14 a considerable portion of the rooms—the whole west wing, in fact—was cleared down to the floor level. Nothing of great importance was found, except the paintings on the ceilings and on the upper part of the walls; the marble dados and pavements had already been removed in ancient times. The rest was left much as it was and regarded, indeed, as inaccessible until in 1907 a young German archæologist, Herr Fritz Weege, was shown the way in by one of the caretakers and investigated all the rooms that were still accessible, publishing his results in 1913. Since then the Italian authorities have been excavating a number of these rooms and some others as well, but no account of the work that they have done is as yet available.

The plan of the palace is not that which is familiar to us in Rome. The central portion is built in the shape of the Greek letter "*Π*," the two sides being inclined to one another so as to enclose a trapezoidal court, in the centre of which there must have been a fountain or a garden. The façades were decorated with colonnades which rose higher in the centre, where there was a large rectangular room round which the others were grouped and on which special emphasis was laid. It has been pointed out that there is a very great similarity between this building and some of the Roman villas represented in the landscapes which decorated the houses of Pompeii, and which may still be seen among the paintings now preserved in the Naples Museum. Villas on a similar plan have been found, if not as yet elsewhere in Italy itself, at any rate in other parts of the Roman world.

On each side of the central portion was a wing of disproportionate size. The west wing which, as we have seen, has been in part excavated has traces of the colonnade in front of it still preserved. Upon it opened a row of long and comparatively narrow rooms, each divided into two parts by niches, so as to serve as dining rooms for summer or winter, according to the season. These rooms were very high (over 30 feet) in proportion to their size, and were probably lighted in the main from the roof, not

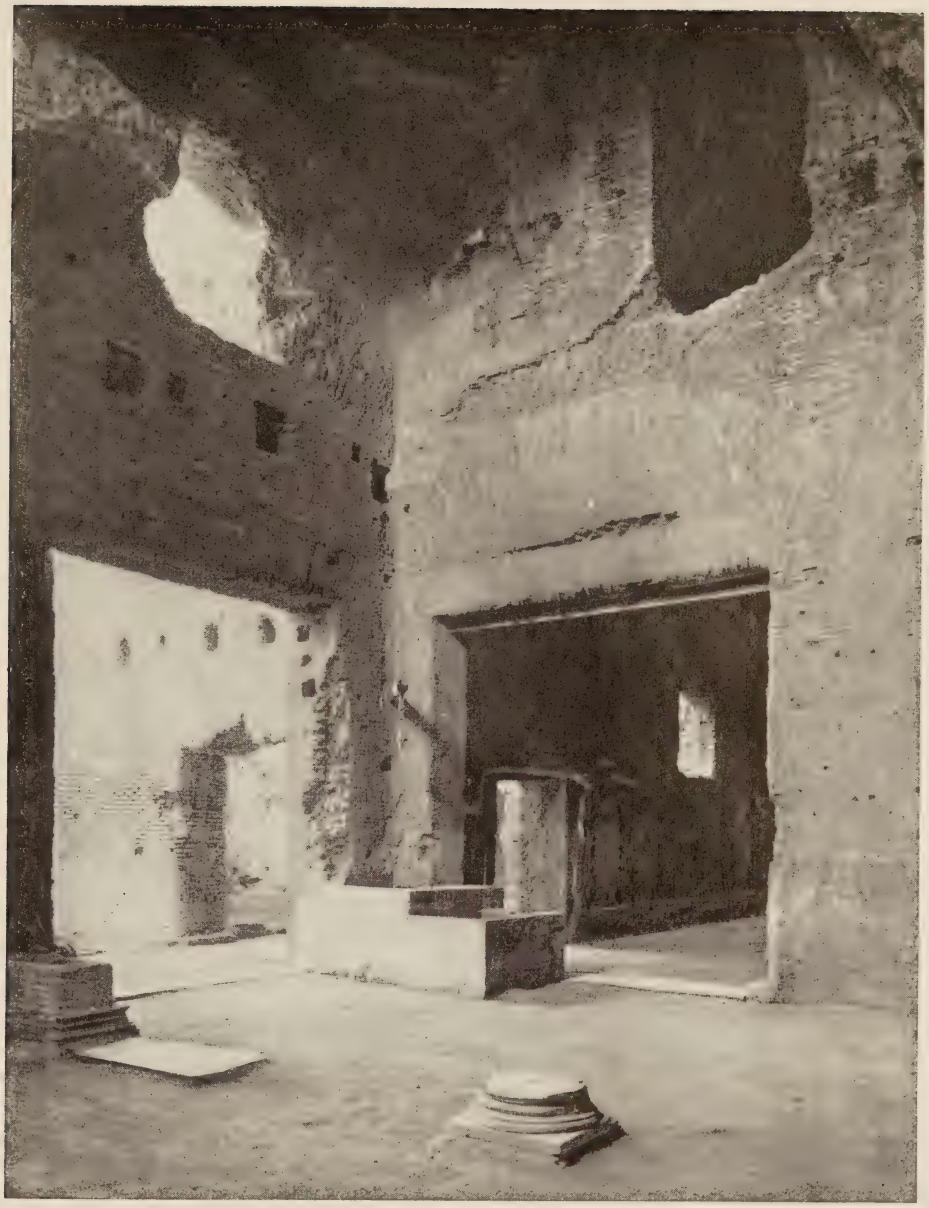


Photo by Alinari.

THE ENDURING MASONRY OF NERO'S HOME

Situated in the west wing of Nero's Palace, the dining rooms formerly opened on one side to the interior walled garden, and on the other (outer) side on a colonnaded court of which part is illustrated above. In the foreground is all that remains of one of the columns, and plaster is observed still adhering to the walls of the inner room.

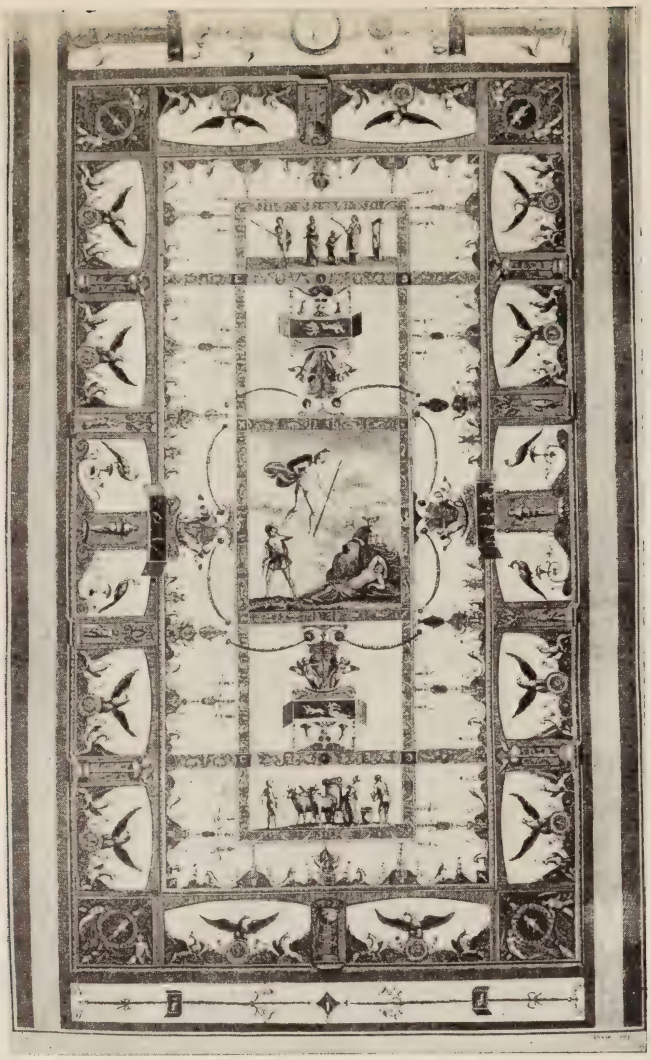


Photo from Dr. Ashby.

MYTHOLOGICAL SCENE IN NERO'S GOLDEN HOUSE

Though long obscured by damp and soot from torches, the decorations of Nero's Palace have to some extent been preserved in copies by artists of later days. This photograph is of a print made in 1776 showing one of the intricately painted ceilings.

Photo by Alinari.

GARDEN FOUNTAIN OF THE GOLDEN HOUSE OF NERO

It is known from contemporary authors that much labour was spent by the Emperor and his architects in the design of the gardens of his magnificent house in Rome. The wall in the background enclosed part of his garden, but the vaulted side walls belong to the great baths later built on the same site by Trajan. In the foreground is the basin of a fountain that once played there when the place was a shady grove planted with trees and flowers for the Emperor's delight.

Photo by Alinari.

WHERE THE MOST INFAMOUS OF ROME'S EMPERORS HELD HIS FEASTS

Modern conceptions of the Emperor Nero are practically all condemnatory; they portray him (and also Tiberius) as a tyrant of the worst type, and one is apt to forget his good deeds. Nevertheless one cannot deny his human torches and his murder of his mother. Above are two apsed halls of the Golden House, probably dining rooms where some of his wild orgies took place; the upper one was used in winter and the lower one, in which traces of decoration can still be seen in the apse, in summer.

from the portico above which they rose to a considerable height. They opened at the back upon a garden with a fountain in the centre, the long back wall of which was painted, probably to represent trees and plants. Behind this wall ran a lofty narrow passage, once decorated with paintings which have now almost entirely disappeared owing to the combined effects of damp and the smoke of tapers. In some other rooms they are a little better preserved, though not so well as when they were drawn and engraved over a century ago. Even in their original condition they must have been very difficult to see because of the smallness of the scale adopted and the elaborate patterns of the design. It is indeed not altogether easy to understand why the Roman painters did not make a better use of the space at their command. A comparison between the paintings of the "columbaria" (small chambers for urn burial of the early Empire) and those of the Golden House seems to show that the smallness of these sepulchral paintings, which were well enough adapted for the decoration of little chambers with their tiny niches, was imitated by the artists of the time of Nero in the decoration of the lofty rooms of which they were fond, where, however, it was most unsuitable.

In the eastern wing which has not yet been entirely investigated we may suppose another central garden, as in the west wing. There is a long underground passage at the back, a cryptoporticus, the ceiling of which is entirely covered with paintings which have been carefully copied by Herr Weege's artist (there are a few small fragments of it at the British Museum which are very well preserved, the original gilding being still recognizable). There are also paintings in several of the other rooms. One of the ceilings has been known as the "volta dorata" (the golden ceiling) ever since the fifteenth century.

In another room is the well known picture which has always been supposed to represent Coriolanus and his mother, but really shows Hector taking leave of Andromache. In this room the famous group of the Laocoon was found in 1506, and here Pliny must have seen it in A.D. 79. Why it was walled up in this room (perhaps in Trajan's time) and not removed to some other building of Imperial Rome is not easy to understand, but this may well have saved the group from destruction at the hands of iconoclasts or lime burners. So huge was the whole palace, we are

told, that it contained a triple portico a mile long. The extent of it was certainly by far greater than what is now visible, and may indeed be fixed, to some extent, by the position of the great water reservoir, known as the "Sette Sale," which originally belonged to it but was later made to serve Trajan's baths. This would give a building about the length of the Vatican and double the breadth.

But the palace itself is by no means all; indeed, Tacitus was more impressed by Nero's reckless expenditure, considering the enormously high prices of land in the centre of the city, in securing for himself a huge park which extended, as we have seen, over a very large area. He says:

> Nero made use of a disaster to his country to build himself a palace, in which the marvel was not so much the jewels and gold with which it was decorated (these had long been a mere vulgar luxury) as the tilled fields and lakes and rural solitudes—here woods, there open country and wide views.

And Suetonius says much the same:

> It was so extensive that it had a triple colonnade a mile long [probably intended for taking a constitutional, like the so-called Poikile at Hadrian's Villa]. There was a pond too, like a sea and surrounded with buildings to represent cities, besides tracts of country varied by tilled fields, vineyards, pastures and woods with great numbers of wild and domestic animals.

There was moreover a number of smaller detached buildings in the park, just as at Hadrian's Villa. Close to the Basilica of Constantine lie some remains now covered by a garden which once formed a part of it, and not far off the construction of a new street (the "Via dei Serpenti") led to the discovery of a small "nymphæum" (or conservatory as we might call it) adorned with niches for statues and no doubt with fountains also, and decorated with sea-shells. Then, we are told, Nero almost destroyed the Temple of Claudius which was in course of construction on the Cælian Hill and on its site, no doubt, there rested one of the minor buildings in his great domain.

His death in A.D. 69 left the building incomplete, and Otho set aside a large sum—nearly half a million pounds—to finish it; while gossip says that Vitellius and his wife ridiculed it as badly built and lacking in comfort.

But Vespasian, who came to the throne in the next year, saw clearly how unpopular, especially among the poor, the Golden House had been, and he and his successors vied with one another in restoring its site to public uses. He himself at once began by draining the great lake and erecting the Colosseum on its site, thereby cutting the heart out of the park and restoring the streets of the whole quarter to public uses once more.

The ancient authors, and especially Martial, are full of allusions to this: "Rome is restored to its old self once more." The statues which Nero had collected from all over the city were dedicated anew in the Temple of Peace, erected in the centre of the Forum of Peace to celebrate Vespasian's Jewish victories and the restoration of peace to the Empire, while the colossal statue of Nero which stood in the vestibule of the Golden House was transformed into an Apollo, and the temple of Claudius was completed on the Cælian Hill.

Titus in his short reign found time to erect some baths opposite the Colosseum, remains of which were brought to light in 1895. But a fire which occurred in his reign and destroyed the remainder of the Imperial Palace on the Palatine rendered it necessary for him to use a part of the Golden House as his palace, and his younger brother and successor, Domitian, was entirely occupied in rebuilding the edifices on the Palatine Hill, which he thoroughly reconstructed. His work was hardly finished when a fire, in A.D. 104, destroyed the Golden House and hastened Trajan's intention of constructing on the site his huge "thermæ" from the plans of his architect, Apollodorus of Damascus. The openings were walled up; the rooms stripped of their marble decorations (not of their paintings) and filled with rubbish to the roof, and rendered inaccessible. Not even the original plan was respected, for the baths lay at an angle of sixty degrees to the older building, so that they might face south-west. Finally Hadrian, in A.D. 121, destroyed the vestibule and erected his double Temple of Venus and Rome on its site, moving the colossal statue nearer the Colosseum. Twenty-four elephants

were used to transport it, and the work was done without its being necessary to tilt the statue. It was decorated with the sun's rays and stood there, where its pedestal still stands, at least until A.D. 354, when a festival was held and the statue was crowned with a garland. Then it disappeared—perhaps it was melted down when Totila and his Goths plundered Rome in the sixth century.

But though it went, and the Golden House had gone long before it, the name of Nero and his wickedness and his great Palace were famed throughout the Middle Ages. There are few legends in Rome and in the Campagna, but Nero is the centre of many of them. His ghost haunted the tower near the "Porta del Popolo" under the Pincian Hill where was the tomb of his family, the Domitii, in which he was buried. Near there, according to mediæval legend, was one of his palaces, but he had many more. The name Lateran was derived from "lateo" and "rana" because there the frog lay hid to which Nero gave birth! He was considered a magician and as such, and as a persecutor of the Christians, handed down to eternal execration while other emperors not perhaps less wicked, though hardly so extravagantly insane, have fallen into oblivion.

THE WONDER CITIES. XXV

TELL-EL-AMARNA: CITY OF AKHNATON AND TUTANKHAMEN

By A. G. K. Hayter, M.A., F.S.A.

TELL-EL-AMARNA: CITY OF AKHNATON AND TUTANKHAMEN

By A. G. K. Hayter, M.A., F.S.A.

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THE ruins of Tell-el-Amarna, that link with one of the most enthralling periods of ancient history, are still sufficiently well preserved to disclose a wealth of information to the science of the excavator; but of the art that enriched the city the completest example is furnished by the tomb of Tutankhamen at Thebes. No excuse, therefore, is necessary for illustrating this chapter on Tell-el-Amarna with photographs, supplementary to those in pages 35-41 *and* 87-94, *of the funerary treasures of the Pharaoh who spent his early years there. The writer of the chapter, Mr. A. G. K. Hayter, desires me to record his special indebtedness to "The City of Akhenaten," Part I., by Prof. T. Eric Peet and Mr. C. Leonard Woolley (both contributors to* Wonders of the Past), *describing the two expeditions of the Egypt Exploration Society, in the first of which he himself took part.*—Editor.

ABOUT 190 miles south of Cairo the sheer limestone cliffs which for many miles have been overhanging the Nile on its east bank suddenly break away and describe a semicircle, returning after six miles to their original distance from the river. The theatre-like area thus enclosed, three miles wide at the centre, is a level sandy plain only some 25 feet above high Nile. The visitor on landing sees at first nothing but a dense fringe of palm trees lining the bank; on his piercing this there opens out before him a glaring expanse bounded by the inevitable horizon of flat-topped hills. A closer examination of the immediate foreground detects a series of long, low mounds, many

of which have been, so to speak, disembowelled and disclose ruins of mud brick walls. To the right there rise two sickly palm trees and a solitary, flat-roofed house—the home of the excavators. A modern village or two, with their domed tombs, lie half concealed in the palm plantations.

This site, somewhat unpromising at first glance, has proved one of the most thrilling in the Near East; it is the only city of ancient Egypt yet uncovered. Its life was short, barely a score of years, yet from its remains has been obtained a vivid picture of the life of the Pharaoh's court, of his nobles and of the poorer classes. So far it is comparable with Pompeii; but the Roman seaside resort adds little to history, whereas the government archives of Tell-el-Amarna throw a flood of light on international relations at one of the most momentous periods in ancient times. But even greater interest attaches to the place from the cause of its foundation. Its existence is due to a great religious revolution, the only one that ever convulsed Egypt, that home of rigid conservatism, during several thousands of years.

Under Amenhotep III. (1411-1375 B.C.) the priesthood of Ammon (Amen) at Thebes had grown dangerously powerful. On his death his widow, Queen Tiyi, a remarkable woman of non-royal birth, encouraged her twelve-year-old son, now Amenhotep IV., to give precedence to the sun god Ra who after being paramount in earlier times had now been ousted by Ammon. The boy king accordingly erected a temple at Thebes to Ra, under the form of Aton (or Aten), "the Sun's Disk," by which he intended to symbolise the deity behind the sun who gives heat and life to the world. He thus at one sweep superseded the worship of Ammon, and with it that of the whole Egyptian pantheon, substituting an ideal monotheism. Finding it impossible to make any headway in the stronghold of Ammon himself he decided, no doubt with his mother's support, on the bold plan of changing his capital. So he sailed downstream some 250 miles and founded a new city on a virgin site "belonging to no god or goddess, no prince or princess, and of which no man could claim ownership." At the same time, as an outward sign of his complete break with the old polytheism, he changed his name from Amenhotep, "Ammon is at rest," to Akhn-aton, "the Aton is satisfied."

Photos by A. G. K. Hayter.

CITY BUILT BY THE HERETIC KING AND ITS BOUNDARY

Upper illustration: The largest of the fifteen boundary marks with which Akhnaton surrounded Tell-el-Amarna. Cut in the cliff at the north-east corner of the plain and 26 feet high, it consists of an inscription surmounted by figures of the Pharaoh and his daughters beneath the rays of the sun's disk. Lower illustration: Central hall of the house of Rames, the King's Vizier, looking south. The door on the left leads to the harem, that on the right to the Vizier's bed-chamber, the ledge between them being the base of a divan. The limestone trough on the right is a washing-basin; on the wall behind are the titles of Rames in yellow on red.

Photos from "The City of Akhenaten," by permission of the Egyptian Exploration Society.

WHERE THE TOMB-MAKERS OF TELL-EL-AMARNA DWELT

To the east of Tell-el-Amarna in the middle of the barren plain is a suburb remarkable alike for its situation and the absolute regularity of its planning (see upper illustration); it was a workmen's village so placed in order to be near the scene of their labour—the excavation of the tombs of the nobles. On another page is a nobleman's house; here (lower photograph) is the living room in a workman's house in this village—they were nearly all identical. A water jar, a food bowl and the hearth in use after 3,000 years are shown.

Photos by A. G. K. Hayter.

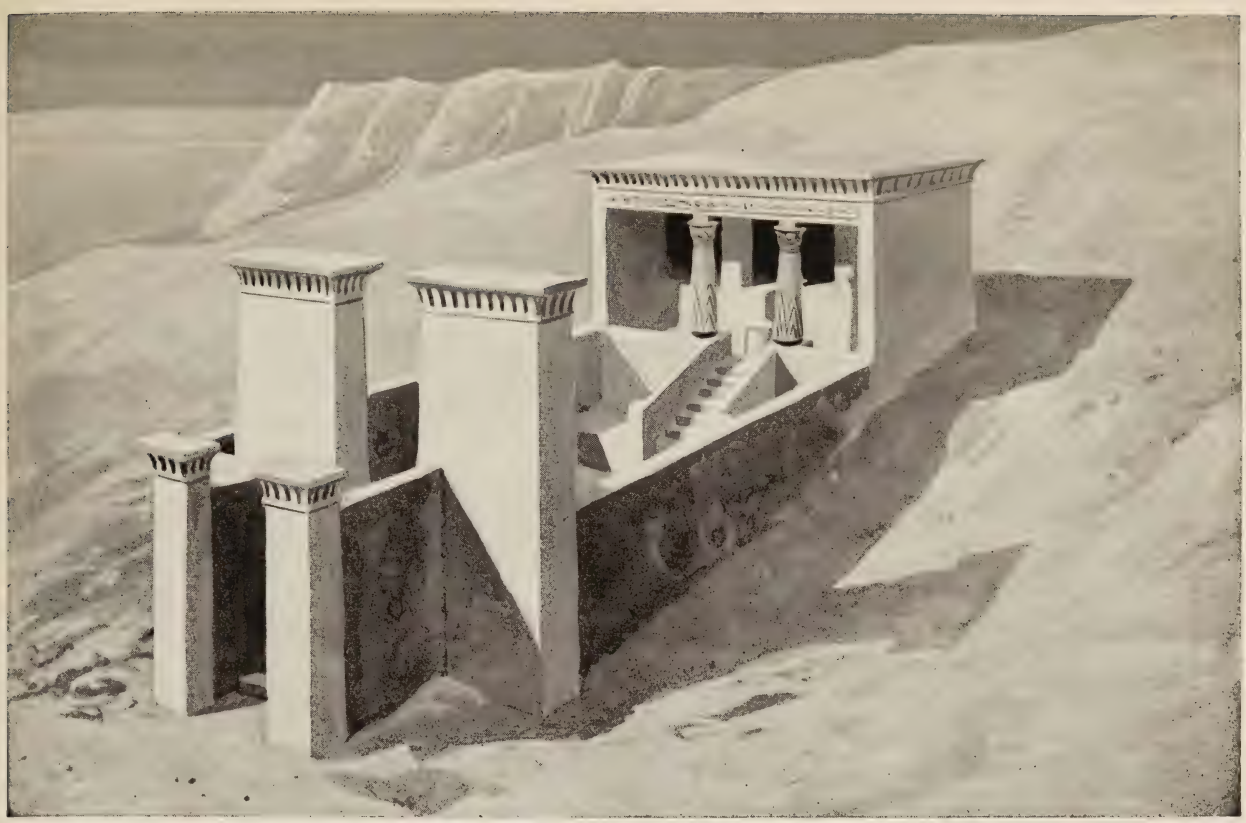
UNFINISHED TOMB THAT WAS NEVER SLEPT IN

Among the rock tombs in the hills south of Tell-el-Amarna is the unfinished one of Ay and his wife, Tiy; observe the door in the background of this, the main hall, leading to an uncompleted niche where their statues would have stood. Ay was the father-in-law of Akhnaton and successor of Tutankhamen, while Tiy is not to be confused with Tiyi, Akhnaton's mother. They were eventually buried at Thebes.

Photo by A. G. K. Hayter.

AY AND HIS WIFE ADORE THE ATON

On the right-hand side of the entrance passage in the tomb of Ay are these low reliefs of himself and his wife in adoration of the Aton. The limestone rock was covered with fine plaster and the figures then exquisitely coloured; the unusual vivacity of the whole composition, characteristic of Akhnaton's "art nouveau," speaks for itself.



Restoration by permission of the Egypt Exploration Society; photo by A. G. K. Hayter.

TOMBS THAT LINK TUTANKHAMEN WITH TELL-EL-AMARNA

Upper illustration: A restoration of one of the many tomb chapels, probably of the upper middle classes, that surrounded Tell-el-Amarna. This particular one is of interest as having contained stelæ with invocations to Ammon, Osiris and other gods as well as to the Aton, thus probably belonging to the transitional period of reaction under Tutankhamen. Lower photograph: Main hall, with statue recess on right, of one of the rock tombs of the rich official classes. The noble in this case was Tutu, Akhnaton's Foreign Secretary; but he was never buried here, for he was probably the man who later assumed a name more familiar to us—Tutankhamen.

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TUTANKHAMEN IN VARIED SCENES ON A GOLDEN SHRINE

From the tomb in which Tutu was actually laid to rest, the wonderful Luxor treasure house, comes this small shrine of the usual shape. It is cased completely in sheet gold and the double doors in front are fastened with ebony bolts. But its charm lies in the beautiful little vignettes of palace life with which it is embossed—Tutankhamen and his queen in all manner of naïve, domestic relations. A jolly, happy couple, one feels, removed by gulfs of thought from the half deified Pharaohs of other periods.

This took place in 1370 B.C., the seventeenth year of his age and the sixth of his reign, when we find him already married to the beautiful Nefertiti and the father of two daughters. We learn that, after a great sacrifice on the thirteenth day of the eighth month, the Pharaoh drove out in a two-horsed chariot of electrum to one of the royal boundary stones, on which the solemn ceremony of dedication is described. There, in the presence of his newly appointed officials, he named the city Akhet-aton, "the Brilliance of the Sun's Disk." He declared the site to be chosen in obedience to a personal command of the Aton, to whom he dedicated the entire domain together with every man and beast and all that grew upon it. Raising his hand to heaven, the king then took a solemn oath not to remove the landmarks. These monuments, which are among the most remarkable of antiquity, are hewn in the face of the surrounding cliffs, three on the west and eleven on the east side of the Nile. The largest is 26 feet high. At the top are figures of the king and queen with one, two or three daughters, duplicated on either side of a loaded altar table. Upon them descend the rays of the sun's disk, each ending in a hand to bless them. Below is the inscription, sometimes as long as eighty lines. The broad tracks which were cleared and swept for the royal procession can still be traced across the plain.

The actual city rose rapidly under the initiative of this extraordinary young man. His architect, Bek, "instructed by his majesty himself," had procured red granite from Assuan; alabaster for the temples and palace was obtained from the Hatnub quarries close at hand; hundreds of bricklayers were unceasingly at work moulding sun-dried mud bricks for the houses of the new capital.

At the north end, about a mile and a half from the girdle of cliffs, the Pharaoh had reserved a large area. Here he erected the temple to the Aton, 250 feet square, within an oblong enclosure half a mile in length. Close by were the palace buildings, covering a space of 1,500 by 500 feet. A painted stucco pavement of remarkable design is one of the few relics of their splendour: around a tank, in which fish and wildfowl swim amid the reeds, are grouped thickets of lotuses and other water plants, while calves frolic amongst them and birds flutter overhead. The postures are so instantaneous, the colouring so delicate and the

style so naturalistic that we may, perhaps, look to Cretan artists for its execution.

South of the royal quarters lay the town itself. Three main arteries were projected running parallel with the Nile. Their irregularity, however, suggests that the magnates pegged out their claims hurriedly, regardless of correct alignment. The most westerly, the King's Highway, led direct from the palace to the King's country park beyond the limits of the city. The latter gradually extended eastwards to the High Priest's Street, an imposing thoroughfare 130 feet wide. On these stood all the largest houses, the fashionable quarter being nearest to the royal residence. The cross streets are narrow, straggling lanes, generally containing only small houses. The streets are neither metalled nor paved, merely the levelled surface of the plain.

The larger residences, each standing clear within its own walled enclosure, present a striking picture of the comfort then enjoyed, and must have made Akhetaton look like the garden city of Calleva (Silchester) in Roman Britain. The visitor, entering through a vaulted porch, would find himself in a garden neatly laid out with beds for flowers and vegetables. Beyond the necessary well several rows of trees whose stumps are still to be found embedded in their little pits of soil led up to a summer house on a raised platform. He would then reach the main house by a long flight of easy steps passing beneath the wide window of the loggia. Turning to the right at the top, he would enter the lobby on the door-posts of which he would see inscribed the name and titles of his host. Another right-angled turn would bring him into the loggia, a gallery with a row of columns down the centre. Here he would be ushered into the reception room through large folding doors, and would find himself in a magnificent apartment in the centre of the house, 12 to 16 feet in height. Four slim wooden columns painted red, with green palm leaf capitals and circular stone bases, supported the beams crossing the ceiling. The upper parts of the white plastered walls had a grey tone, enlivened by large festoons, like mummies' necklaces, hanging from a decorative frieze of lotuses.

The guest was conducted to a shallow limestone pan, where, seated on a stone stool, he had water splashed over his hands and feet. Thus refreshed, he would join his host on a low brick

luced from "The City of Akhenaten," by permission of the Egypt Exploration Society.

LOVELY FRESCOES IN A WATER GARDEN WHERE AKHNATON REPOSED.

t the south end of the Amarna plain was a complex of buildings called for a reason unknown Maru-Aton or the Precinct of Aton; its main feature was an ial lake. In a kind of water court were a number of low tanks with their sides (as well as the walls and floor of the court) painted in lovely natural designs of and reeds and water plants such as those above. The entrance to the whole precinct formed a court with four rows of nine graceful columns each, of which one e restored from extant fragments.

divan against the opposite wall, lounging on mats and cushions. In cold weather a charcoal fire would be lit in a pottery brazier sunk in the floor; the actual ashes were found in many of these braziers—evidence of the sudden evacuation of the city. The only means of lighting and ventilating this central hall, except through the doors, was by stone gratings placed high up close to the ceiling. At either end of the inner wall was a sunken panel with a painting of the royal family adoring the sun's disk. On its side-posts are again recorded in coloured lettering the owner's name and titles. Between these panels another double door leads into the harem or wife's quarters. A square sitting-room, furnished with a pillar and a second divan, is surrounded by smaller rooms, evidently for the children and for wardrobes, represented by shelves on brick supports. The master's bedroom is in one corner on that side of the house, the position of the bed being indicated by a raised brick platform at the end. Between his room and the harem are the bathroom and the earth-closet. The "bath" is merely a stone slab on which the occupant was douched from a large jar. Limestone panels protect the walls and a side channel carries off the water, either into a receptacle sunk in the floor or into the courtyard through a hole in the wall. Of the remaining rooms some are store-rooms, others single bedrooms. That for the visitor was probably placed near the entrance at one end of the loggia. The brick staircase, opening directly out of the hall, led to the flat roof, where only light sun-shelters were usually erected. Here the women-folk could spin and weave.

In the courtyard were the servants' quarters, the stables and cattle-stalls, the corn bins and the cooking ovens. The barley was stored in small chambers with domed or gabled roofs, both floor and corn being covered with a layer of fine charcoal to preserve it, just as the peasant does to-day. The baking was done in a big cylindrical jar of pottery, encased in mud to retain the heat and open at the top for the insertion of the bread-trays. The charcoal fire within was stirred with a wooden poker pushed through a hole left for the purpose at the side.

We know the names of several officials who lived at Akhet-aton. Nekht, Vizier and overseer of the city, occupied the finest of all the houses, 116 by 85 feet in size. Another vizier, Rames,

was also General of the King's Forces and Royal Scribe. He had been Master of the Household to Akhnaton's father, Amenhotep III. His house gives us the rare information of his wife's name: "The mistress of the house, Nebt-ant." There were also the houses of the Master of the Horse, the Keeper of the Cattle of the Aton, the High Priest Pa-wah and the King's secretary. It was indeed a busy city. That new art, which broke away from the old stuff conventions and based itself on the study of nature, is also due to the king's initiative. The names of two of his sculptors are preserved. The court artist, Auta, has given us a picture of his studio in which he is colouring a statue of Bektaton, the king's sister. Another sculptor, Thothmes, has left behind many attractive royal busts and relief models. From the glass and glaze factories we have inlaid tiles, amulets, cups, rings and beads, chiefly in blue glaze. A glass fish-bottle, unique in form, of blue, yellow, and white ripple pattern, now adorns the British Museum.

Close to the military post which guards the southern entrance to the plain the king had laid out a pleasure resort which he called Maru-Aton, "the Precinct of the Sun's Disk." On this remarkable site were found portions of stucco pavements similar to those recovered from the palace.

It consists of two rectangular enclosures, one double the size of the other; the smaller contained a home farm and a pond, while in the larger one, which was screened off by a high wall, were an artificial lake with a pier for the use of the royal boating party, a temple, a summer house and a hall of audience. Here, no doubt, Akhnaton was glad to escape from the burden of empire and to spend a happy holiday, either sailing thither in the royal barge or else driving in his chariot with his wife and daughters, as he loved to have himself depicted on the walls of his nobles' tombs. We may certainly conclude that the Pharaoh entertained right royally during this day's excursion. The cellar at the back of the audience court was found crowded with broken wine jars and 280 jar-sealings bearing labels descriptive of the various wines, such as "Wine of the House of Akhnaton," "Wine of the Southern Pool," and in many instances even the date of bottling and quality of vintage were noted.

In the meantime what was happening in the outer world?

AKHNATON PORTRAYED BY THE ART HE INTRODUCED

Compare this relief of Akhnaton and his lovely queen, Nefertiti, with the portraits of Tutankhamen elsewhere; the art is the same, better even, but several eccentricities such as the elongated head and protruding stomach are noticeable. It was among the early discoveries of the Germans on the site of Tell-el-Amarna, and is now in the Berlin Museum.

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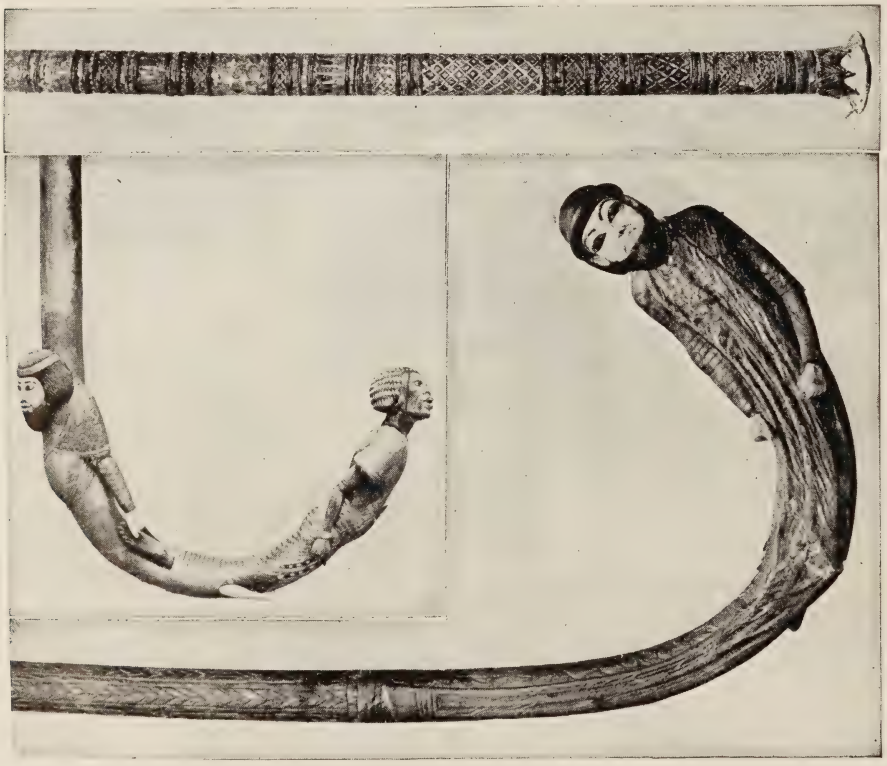
INCOMPARABLY CHISELLED ALABASTER BOWL

"May thy ka live and mayest thou spend millions of years, thou lover of Thebes, sitting with thy face to the northward and thine eyes beholding felicity." Such is the inscription, perhaps in honour of his return to Thebes, running round the rim of Tutankhamen's wishing cup. It is of lovely translucent alabaster in the form of a lotus, with half open lotus flowers forming the handles.



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QUAINT STICKS ON WHICH A PHARAOH LEANT

Handles of three of Tutankhamen's walking sticks; they are without parallel in Egyptian art. The mosaic inlay of the upper example for instance is quite foreign to Egypt. The two figures in the centre represent the northern and southern enemies of Egypt—Asiatic and Negro in ivory and ebony respectively. The dress is of gold inlaid with jewels and the ivory is painted.

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TUTANKHAMEN AND HIS QUEEN IN GOLD AND GLASS AND JEWELRY

The body of Tutankhamen's coronation throne is covered with sheets of beaten gold inlaid with faience, polychrome glass and exquisitely cut precious stones. On the back panel, which for quiet pathos and superb workmanship is unequalled among the fruits of archæology in Egypt, is a relief of the king sitting on a cushioned seat in his palace, while his queen with a gesture of delightful intimacy offers him a cup. Above the group the sun-disk radiates life symbolised by long rays ending in little hands.

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SEAT WELL EQUIPPED BY CRAFTSMAN AND ARTIST TO THRONE A PHARAOH'S SPLENDOUR

Tutankhamen with all his funeral pomp was buried not at Tell-el-Amarna but at Thebes; and yet much of the gorgeous furniture that decked his tomb may have actually been made at the City of the Brilliance of the Sun's Disk. In any case, it is typical of the art that throve there, although slightly modified from the almost self-conscious eccentricities of Akhnaton's regime—a reaction against the formality of centuries. Here are two views of the Pharaoh's coronation throne. It stands upon legs shaped like lion's paws, while the arms take the form of serpents crowned with the double crown and supporting with their wings the king's cartouche. Between the sloping back and its vertical supports are crowned cobras symbolising protection.

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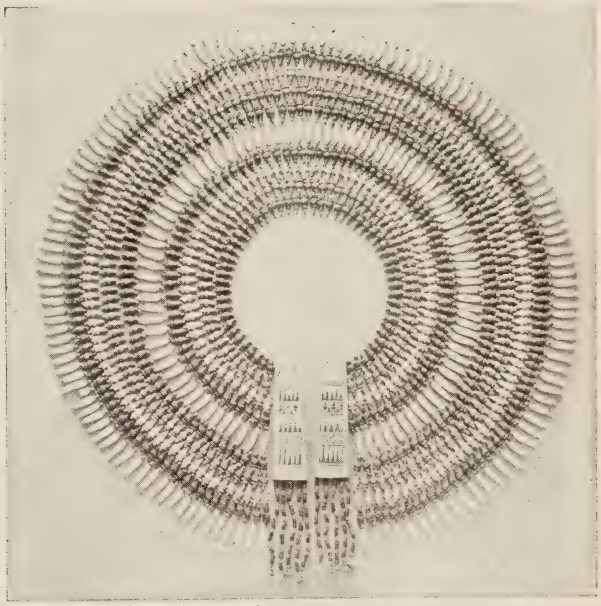
HOW MARTIAL EMBLEMS WERE HOUSED

In the antechamber of Tutankhamen's tomb were found several small wooden shrines each containing some sacred object. Above is a photograph of one of these shrines before it was opened; the Royal Necropolis Seal may be seen intact. At the top, right, is a closer view of this seal, cracked but still holding firm.



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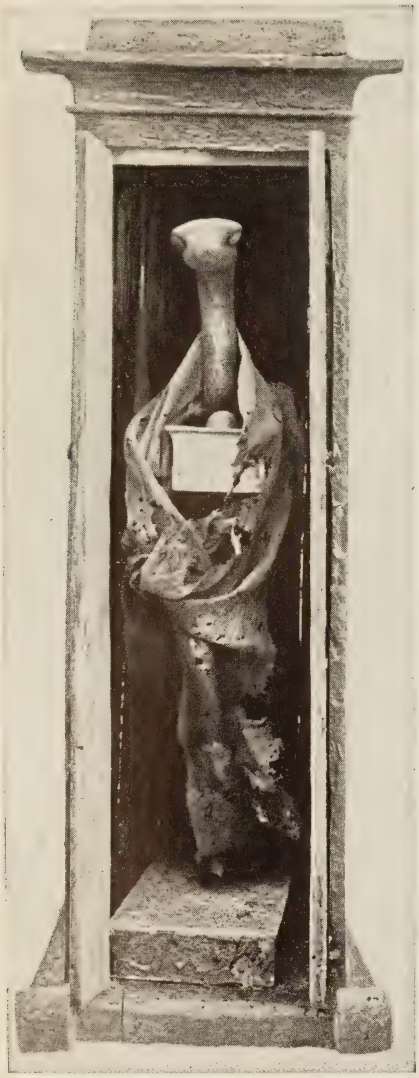
COLLAR OF TUTANKHAMEN'S ROBE

From a casket in the tomb of King Tutankhamen comes this collar of faience work; it consists of many coloured beads and pendants shaped like flowers and petals, and is put together in the precise order in which it was attached to the king's shirt.



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SNAKE STANDARD OF AN EGYPTIAN NOME AND ITS SHRINE

Above are two photographs illustrating the contents of such a shrine as the one in the preceding page. On the left the double doors are seen open and displaying the sacred standard within swathed in its crumbling pall; on the right is the serpent and feather standard itself. It is of wood heavily gilt and was the emblem of the tenth "hesp" (nome) of Upper Egypt, known as Uazet, with its capital at Tebu or Aphroditopolis. It was placed in the tomb as a protective influence for the dead king on his perilous journey to paradise.

Akhnaton had succeeded to a vast empire in Asia, extending as far as the Euphrates and up the Tigris to Assyria. This motley collection of kings and petty dynasts required a strong hand to keep them in order; but the Pharaoh was totally indifferent to what was happening abroad. This we learn from a chance discovery by native diggers. In 1887 they found on the site of the Royal Record Office several hundreds of clay tablets inscribed in cuneiform characters. These are the actual correspondence which reached the Foreign Office from Palestine, Syria, Babylon and Assyria. In them is told the sad story of the gradual loss of the Egyptian Empire in Asia. We read of the quarrels and disaffection of the local rulers, the desperate appeals for help from Egyptian governors and the few faithful adherents, and the gradual absorption by the Hittites of North Syria. But Akhnaton turned a deaf ear to all, and was content to abandon his Asiatic empire to anarchy or foreign rule. His motto was Peace. He was engaged in developing his monotheistic ideals at home. At Thebes he was defacing the monuments of Ammon, while in his own capital he was cutting for his nobles fine rock tombs never to be completed.

About a mile and a half to the east he built a walled village for the workmen thus employed. This is a remarkable example of town planning. It is an exact square of 230 feet; six lines of four-roomed tenements, all 16 by 32 feet, open on five parallel alleys, all 6 feet 6 inches wide. But the street scene was typically Oriental: some ran cellars under the alley from their front rooms, causing a hump in the ground; others put their big water jars outside their doors or kept their cows and donkeys tethered to the street walls; elsewhere a brushwood awning gave shade to women, who sat out spinning. Inside, the living-room was often shared with pet animals and the staircase was crammed into the kitchen.

On the slopes overlooking this rookery the workmen had raised a series of tomb chapels. These unique buildings of plastered mud brick rise in three stages up the hill side. The outer court with its gateway towers leads to an inner court distinguished by a low bench running all round for the worshippers. Beyond this, and connected by steps, is the actual shrine, with niches in its back wall. A brick pedestal altar stands on the shrine floor, and the offerings were made in whitewashed pottery

bowls. This third section was handsomely roofed in with a portico supported by mud brick columns plastered and painted.

Space does not suffice to describe the grand tombs which Akhnaton employed these workmen in hewing out of the rock face of the surrounding cliffs. They were built only for those whom the king delighted to honour. Some, like Ay, Tutankhamen's successor, were actually buried at Thebes. In every case the chief interest centres round the king; the noble himself is introduced merely to illustrate the royal munificence. Each tomb has its own private road still visible, running across the plain. On the flat heights above guards kept watch day and night. Their patrol paths and huts remain as evidence.

In view of Lord Carnarvon's recent discovery, any connexion of Tutankhamen with Tell-el-Amarna is of interest. A fine tomb in the eastern cliffs was begun for one of Akhnaton's greatest nobles, Tutu. The inscriptions on its walls record that he held eight important offices, amongst them those of Lord Chamberlain, Chief Commissioner of Works, Lord High Treasurer, and Foreign Secretary. In fact, he was "almost, if not quite, the highest official in the realm, enjoying the king's closest confidence." Such an one can hardly be other than the later Pharaoh who married Akhnaton's third daughter. The addition of "-ankhaton" to his original name on his accession would be entirely suitable.

Interesting evidence has been obtained from one of the tomb chapels of the wave of reaction to Ammon worship, to which Tutankhaton ultimately gave way. There a painted tablet was found, dedicated by one Ptah-may (itself a forbidden name), whose daughter was called "Handmaid of Isis." This Ptah-may "hedges" by addressing prayers both to the expiring Aton and to Amen, Shed and Isis, deities of the old pantheon. Tutankhaton himself seems to have temporised at first, restoring the temples of both religions. Finally, the old cult won, backed as it was by the army under Horemheb. Tutankhaton abandoned Akhetaton for Thebes and changed his name to Tutankhamen to emphasise his reversion to the old state religion.

And what is known of Akhetaton after its desertion? The city was officially evacuated about 1355 B.C., when the court and its dependants left. But the fertile strip along the river bank continued to be cultivated by a few peasants, as is the case to-day.

Based on a reconstruction in "The City of Akhenaten," by permission of the Egypt Exploration Society.

RICH COLOURING OF A NOBLEMAN'S HALL IN TELL-EL-AMARNA

The central hall in the house of Nekht, a high official at the court of Akhnaton, was lofty and spacious; every detail in this restoration of it, including the colouring, is based on reliable evidence secured on the spot. The roof was supported on four wooden columns grouped in the centre. In the foreground is a brick divan surrounded by a low coping, before one of the three entrances in the colonnade a portable hearth smoulders in a circular depression. Against the wall opposite is the lustration slab where guests might wash with water from a great pitcher. Most of the light is admitted through the entrance out of sight on the right; the principal function of the small windows under the roof must have been that of ventilation.

Of their slight occupation there is evidence from the time of Rameses III. (1198-1167 B.C.) down to the sixth century B.C. After that silence reigns until the Christian era, when the Romans pitched a camp near the south end of the plain and Coptic hermits dwelt in the nobles' tombs, even converting Panehsi's hall into an apsidal baptistery. Here the carvings of the original Aton worship are to be seen under the half-fallen plaster on which the Christians painted their emblems. Such is the story of Akhetaton, the short-lived creation of Akhnaton, the so-called "Heretic King."

THE ROYAL PALACES. VIII

DIOCLETIAN'S PALACE AT SPALATO

By F. N. Pryce

DIOCLETIAN'S PALACE AT SPALATO

By F. N. Pryce

Of the Department of Greek and Roman Antiquities, British Museum

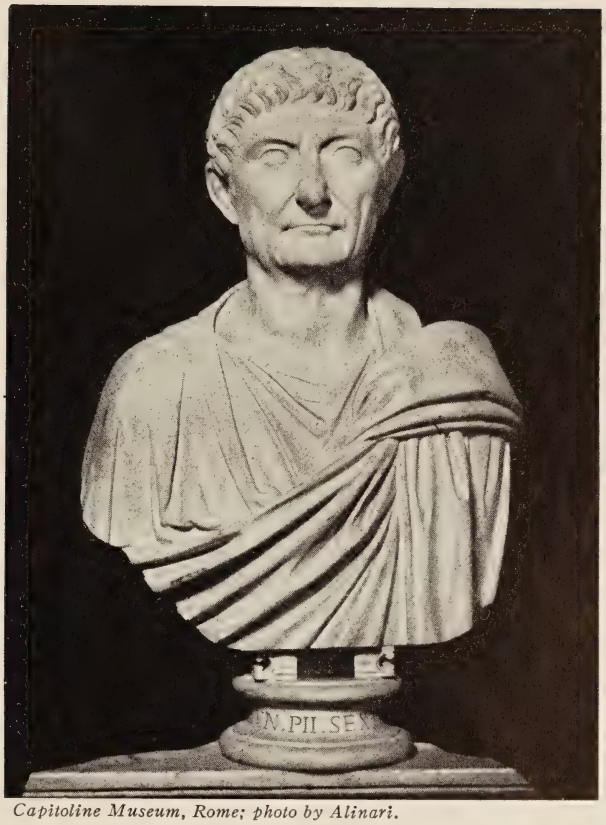
Of the many architectural legacies that give us an inkling of Rome's great glory in ancient days, probably none is less known to the general reader than the country palace of Diocletian, that Emperor whose inborn astuteness and organising ability held the Empire together when its state seemed precarious and whose simple ideals led him to renounce the glory of the purple while still in his prime for the pastoral delights of his native province. The great palace is situated on the coast of Dalmatia, that most debatable of all lands, and the fact that this district is off the beaten track of the tourist may account for the cloak of oblivion that overlies the building; yet I should feel that such a work as Wonders of the Past *were incomplete if it lacked an account of this great monument.*—Editor.

To a person of average intelligence the Roman Emperors of the first and second centuries of our era are at least vaguely familiar; we can roughly discriminate between the cautious Augustus, the unspeakable Nero, the saintly Marcus Aurelius; we may see their features and physical peculiarities reproduced for us in hard marble in the galleries of the British Museum. But the succeeding third century is an age of wars and rebellions, in the midst of which Emperors rise and fall, leaving little more than a bare name in a dusty chronicle as a record of their existence. Of Diocletian few know more than that he persecuted the Christians, and abdicated to grow cabbages in a garden; indeed, the whole sum of our knowledge is confined to the most meagre outline of his career. Even his personal appearance is unfamiliar: his coins show a bull-necked man with long, straight nose and close-cropped hair and beard; but of the sculptured heads which are sometimes labelled as Diocletian in museums not one can be called a certain identification.

Yet in the long list of Emperors there is no one of whom we so much desire fuller knowledge, for his claim to rank among

the greatest of all will not be disputed. If Augustus founded the Empire and ended the civil wars, Diocletian equally founded it anew and gave civilisation a respite after fifty terrible years of anarchy. And whereas Augustus possessed all the prestige of nobility as the heir to the dead Julius Cæsar, Diocletian started on the lowest rung of the ladder. His parents were slaves in a small provincial town and he entered the army as a private soldier. How he won advancement we do not know, but in A.D. 285, at the age of thirty-nine, he was raised to the Imperial purple by the troops. He was chosen for his fighting abilities, for in those critical times the first duty of a Roman Emperor was to fight; and it does not surprise us that he succeeded in crushing internal rebellions and barbarian invasions, and re-established the Roman peace. But what is surprising about this uneducated soldier is that, having put down his enemies, he boldly attacked the social and political disorders of the age and strove by a series of reforms as far reaching as original to rebuild fundamentally the whole fabric of society in the Roman world.

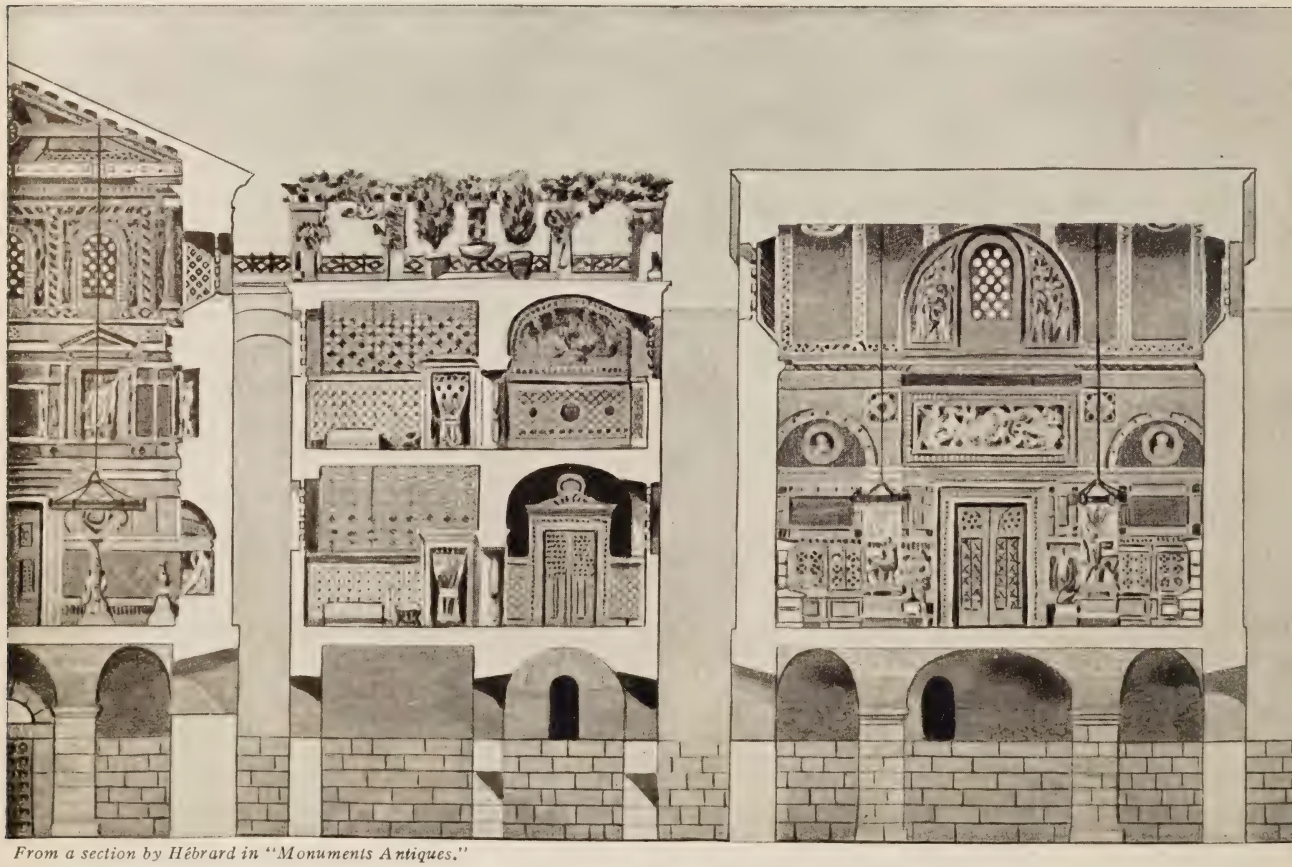
With one of his reforms we are concerned—his attempt to regulate the succession to the Imperial throne. Historians are agreed that the disasters which befell the Roman world in the third century—disasters from which the western half of the Empire never fully recovered—were largely due to the fact that no fixed principle of legitimacy existed whereby, when an Emperor died or proved incapable, a successor could be peacefully chosen and legally installed. Hence came general insecurity and frequent civil wars in the midst of which the barbarians seized their opportunity. To prevent further confusion and to ensure adequate supervision of the threatened frontiers, Diocletian ordained that there should always be two Emperors reigning contemporaneously, together with two "Cæsars," who were to succeed automatically. And having thus done what lay in his power for the future welfare of the State, on May 1, 305, at Ismid near Constantinople, he divested himself of the diadem which he, first of all the Emperors, had dared to wear, and retired into private life. He was not yet sixty years of age and though twenty years of strenuous rule had left their mark on him, there can be little doubt that his object was largely to put his system to the test of a practical experiment. This much can be said, that his abdi-



Capitoline Museum, Rome; photo by Alinari.

IMPERIAL BUILDER OF SPALATO

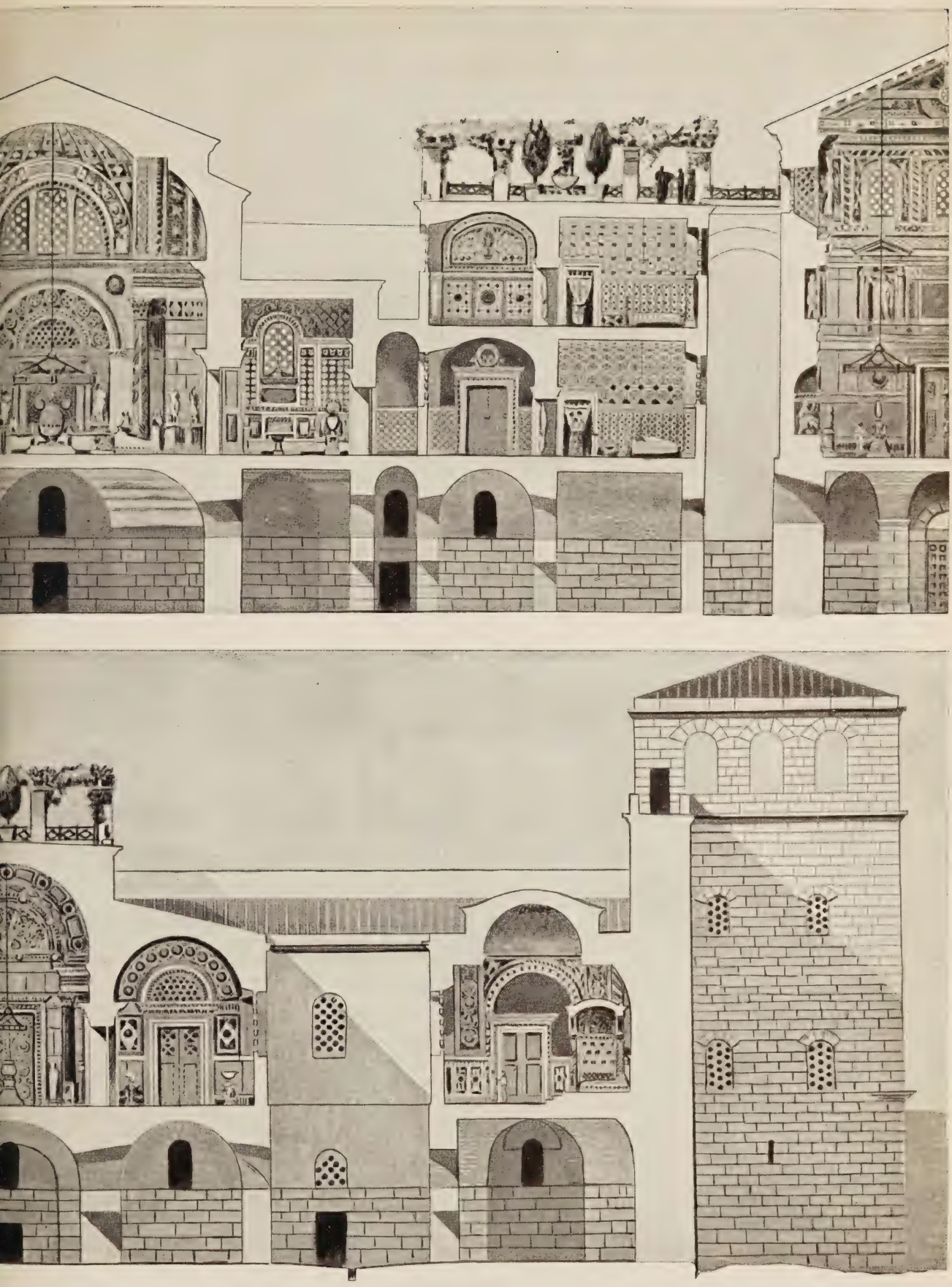
Of obscure Dalmatian parentage, but a born military genius, Diocletian rose to be Emperor in A.D. 285 and became one of the greatest of Rome's later rulers. When the cares of state wearied him, he built as a country retreat the Palace of Spalato.



From a section by Hébrard in "Monuments Antiques."

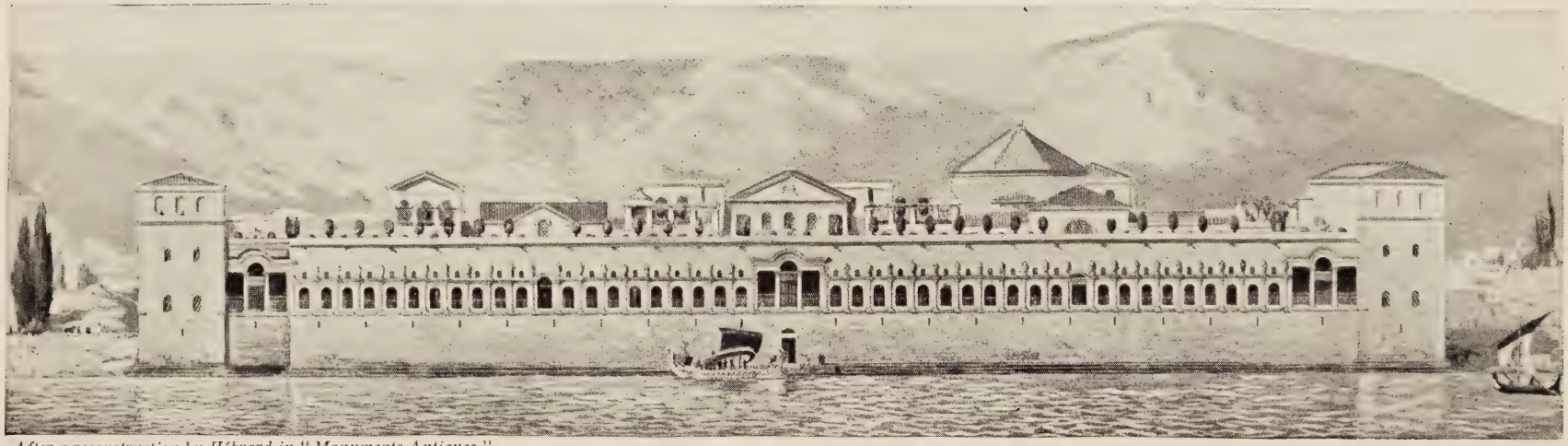
ABOVE THE SOARING VAULTS OF THE PILLARED HALLS ARE ROOF GARDENS AND PERGOLAS—

This elevation of Diocletian's Palace at Spalato shows the great rooms on the south façade. It is continuous from tower to tower and has



—BELOW ARE THE ARCHES OF THE SUBSTRUCTURES RESTING ON GREAT BLOCKS ON THE SEA LEVEL

—only been divided into two parts because a reproduction reduced any further would have been less clear as regards architectural detail.



After a reconstruction by Hébrard in "Monuments Antiques."

GRACEFUL ARCADE IN THE SOUTH WALL OF DIOCLETIAN'S PALACE ON THE ADRIATIC

The reader who wishes to gather an adequate conception of the wonderful and lavish style of Diocletian's great house is advised to study this picture in its relation to the double page section in the preceding pages, and also together with the most illuminating bird's-eye view given in the colour section. This restoration of the southern face shows the fine cloister running along the entire façade between the corner towers, with the decorative arched gates in the middle and at the ends. Before the postern door in the centre of the solid lower wall projects a stone platform used as a landing stage. The present condition of this part of the palace is shown in the following illustration.

cation was due to no sudden impulse, as some years previously he had commenced the building of a residence to house him in his retirement.

The site he had selected was one of the fairest spots on the beautiful coast of Dalmatia his native province, a few miles from the city of Salona. Here between the mountains and the sea the modern town of Spalato stands largely within the walls of Diocletian's palace, which include an area of over nine acres. Some idea of the pomp which surrounded a Roman Emperor may be gained when we reflect that at a time when the Empire was long past its zenith in wealth and population an Emperor could build a palace larger than the Escurial of Spain as a country villa in which to spend his declining years. More than six centuries later a Byzantine Emperor, himself born in the purple, declared that in its ruin it surpassed all powers of description. Even today, when the mean edifices of the modern town have overgrown it, its vast proportions and solid construction excite astonishment. Fortunately, despite all modern alterations, the principal internal buildings and most of the exterior walls are still standing.

Like many other Roman buildings, the palace had but little of beauty or of the picturesque in its external appearance. It was a quadrangle surrounded by walls of uniform height, broken by low towers. The general proportions were low and squat and the impression must have been that of a walled town rather than of a single residence. It is only on a near approach that the vast scale is perceived. Though low relatively to the length of the sides which vary from 580 to 700 feet, the walls themselves are nowhere less than 50 feet in height, which in some places, owing to the fall of the ground, becomes over 70 feet. The material is a fine limestone little inferior to marble.

The external decoration is limited to the south side, facing the sea, where an open cloister runs along the whole of the upper part of the front, and to the gates, of which one opens in the centre of each side. Otherwise the exterior walls are those of a fortress, plain and unbroken save for a defensive gallery. On the sea front little danger was to be apprehended and here the long range of cloister arches not only provides a fine architectural feature, but reveals an appreciation of natural beauty hardly to be

expected of the designer of the grim battlemented walls. The four gates are named respectively the Golden on the north, Silver on the south, Brazen on the east, and Iron on the west. The Golden Gate is richly adorned with Corinthian colonnettes and arcades; the others are similarly but less abundantly decorated; the Brazen Gate no longer exists, having been replaced by a mean modern doorway.

Within the gates the plan is cunningly contrived on a scale of increasing splendour. Two streets crossing one another divide the palace into quarters, save that the main street, running north and south, does not extend through to the south, but stops in front of the Imperial apartments which occupy the whole south front, facing the sea. This arrangement, like the exterior, recalls to us the traditional lay-out of a Roman camp. Entering at the Golden Gate, we should originally have found ourselves in a street about 36 feet wide, running south to the vestibule of the palace proper, and intersected in the centre by a similar street running east and west. Both streets were lined with arcades, as was usual in the Roman cities of the Orient, one of many reasons which have led archæologists to suppose that the architects of the palace came from the eastern half of the Empire.

Much of this has now disappeared, and the two blocks of buildings which occupied the northern quarters are in too ruinous a state for a certain determination of their purpose. One may have been the quarters of the officers of the guard, the other may have contained domestic offices. Around them, inside the walls, ran a row of small chambers which were probably the barracks and stables of the guard. Continuing our advance southward from the crossing, everything up to the palace entrance remains practically complete to this day. The low side arcades of the street are replaced by lofty and graceful rows of columns of "cipollino" marble and red granite, which form open screens through which on either side was seen an enclosed court containing a temple.

On the east is the Temple of Jupiter, now the cathedral. This is an octagon surrounded externally by a colonnade; in front was originally a projecting portico, which has been removed to make way for the superb mediæval Campanile, the most conspicuous feature of the modern town. The interior is circular

Upper photo from "La Dalmazia nell' Arte Italiana," by Dudan.

GLORIOUS ANTIQUITY OBSCURED IN A POOR MODERN SHROUD

In the preceding illustration appears a restoration of the great sea-face of the palace illustrated above; it will be noticed how the mean erections of modern days have found their support in the ancient masonry of Diocletian's building, and also that the sea has retreated considerably since ancient times. Below, the Golden Gate, which is still in fair preservation; arches once supported by Corinthian colonnettes and niches for statues are the decoration of its exterior façade of large unmortared blocks.

with a domed roof and two tiers of columns, the lower of granite, the upper alternately porphyry and granite. The tradition that this building was a temple of Jupiter is very ancient, but some authorities have suggested that it was originally Diocletian's tomb. It has been a Christian church since A.D. 650. Two Egyptian sphinxes of black granite, probably of the eighteenth dynasty, originally stood one on each side of the entrance. One is still to be seen in the court, the other is in the museum. In the western court is a small oblong shrine, on a lofty base, originally faced with a portico of four columns which has now disappeared. The doorway is richly sculptured; it is 15¾ feet in height, 7¾ feet in width, and with true Roman magnificence is composed of only three stones. At present it is used as the baptistery; but the same tradition which assigns its neighbour to Jupiter gives it the title of Temple of Æsculapius.

Between these two courts the peristyle ends in a flight of steps and another portico, the entrance to the Imperial apartments; beyond this was the vestibule, a circular room with a dome, now fallen, which leads into the grand hall or throne room, a stately saloon nearly 100 feet in length. The whole of this area is now thickly built over with modern habitations and the actual arrangement of the interior is largely a matter of conjecture based on such scraps of ancient stonework as are still visible. The most recent investigators consider that on each side of the grand hall was a corridor flanked by six small rooms, perhaps sleeping apartments or guest chambers. To the west of these came a second large saloon, perhaps a library, and beyond were the Emperor's private apartments which included another large reception room and a set of baths. To the east came first the state dining-room, and beyond this the private suite of the Empress Prisca. At a lower level, leading from each side of the vestibule, were various apartments some of which no doubt were used as kitchens; the others would be domestic offices.

It is not impossible that another storey may have extended over at least parts of the ground floor, but of this there are no remains. In any case, the main halls were only one storey high and lighted from the top or by clerestories. Internally they were no doubt bright with marble and mosaic and the courts must have been gay with flowers and plants, but there was no view of

the outside save from the portico along the southern face, or perhaps from terraces on the roof.

Such was the home Diocletian built himself. As the monument of a remarkable man, and also as the best preserved of all Roman Imperial palaces and the most eloquent witness to a magnificence of which we can form but an imperfect conception, its interest is abiding. To lovers of art it has another value in that it marks an era in architecture—the end of the ancient, the beginning of the mediæval styles. Gibbon observes icily that the "awful ruins of Spalato are not less expressive of the decline of the arts than of the greatness of the Empire." But a more recent critic, Freeman, gives to the architect of Spalato the honour of "taking the greatest step ever taken, the beginning of all later forms of consistent arched architecture."

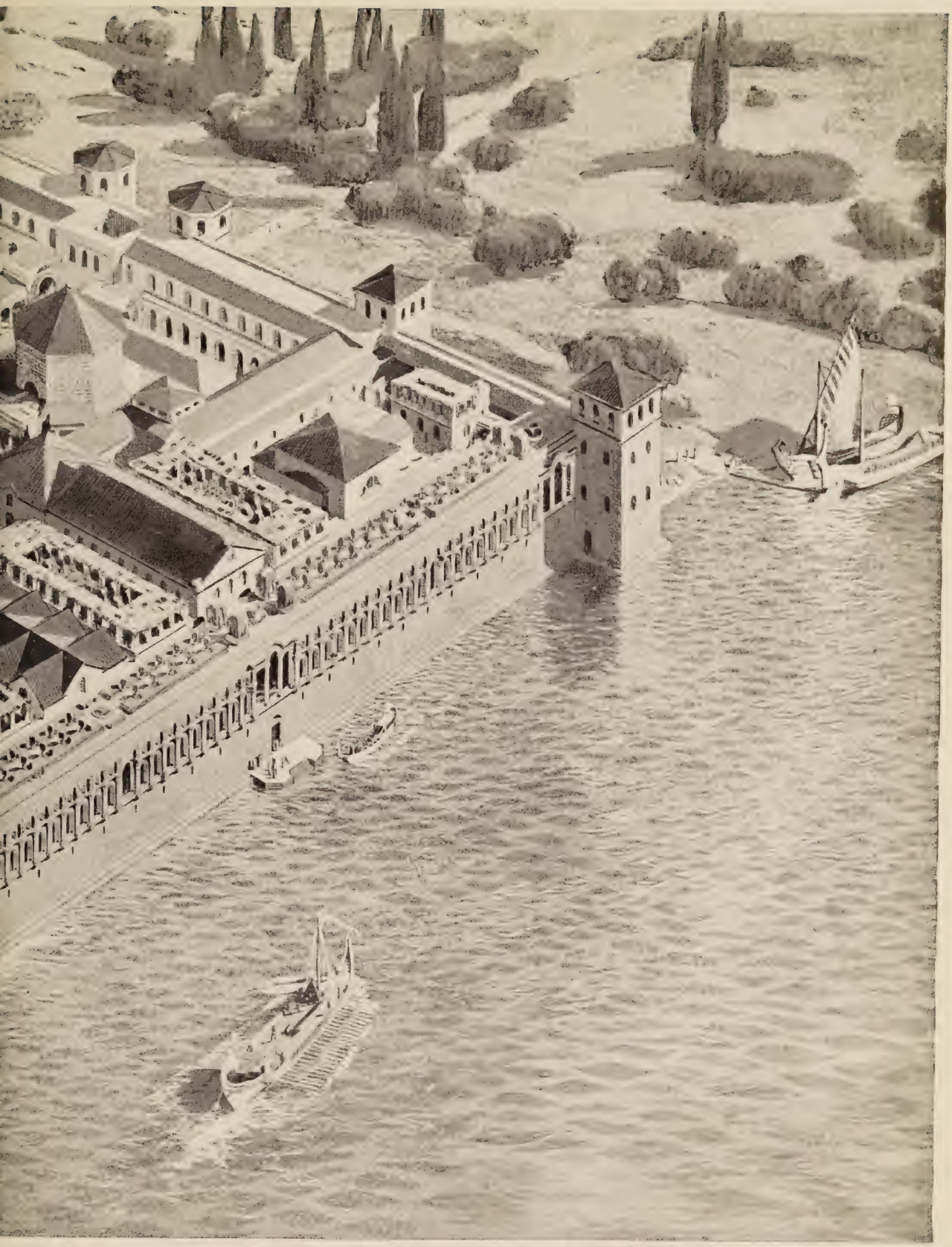
Greek architecture is one of flat lintels, mediæval architecture is one of arches. Roman building shows the transition between the two. The Roman inherited the Greek tradition and set to work to improve on it. The old criticism of Roman architecture that it is a degraded copy of the Greek, because Roman buildings do not show the exquisite proportions or the finished detail of Greece, misses the point; the Roman was pre-occupied with experiments in construction which had never entered the head of a Greek. And seeing that his experiments led him towards the arch and the vault, the Roman architect was in constant revolt against his Greek masters who had refused to accept the arch.

As an example of this clash of styles, we may take the exterior of the Colosseum (see illustration facing page 936). Here is a Roman building with a Greek covering to satisfy contemporary taste. The rows of pilasters and flat architraves are Greek, but they are entirely unstructural; they are simply ornament added to the vaulted Roman building behind them. Now, the interest of the Palace of Spalato lies in the fact that it is the earliest building known to us in which the two styles are successfully blended, and in it we may even trace the development in the mind of the architect. At the Golden Gate (see illustration facing page 1064) the whole of the structural work is performed by the massive discharging arch, but the flat Greek lintel is still retained; it is a useless encumbrance, but the architect has not been

After a reconstruction by Hébrard in "Monuments Antiques."

WONDER PALACE OF A ROMAN EMPEROR WHO RESIGNED—

Resembling more a walled and turreted township than the country seat of an emperor, Diocletian's Palace was singularly plain as to exterior decoration, and it is only on the southern façade in which appears the pillared terrace that this plainness is not found. Built in quadrilateral plan, the walls rise in places to 70 feet, varying in length from 570 to 700 feet, and are of limestone. Inside are two main streets that cross in the centre of the complex and run to the wall gates, these being on the north the Golden, on the east the Brazen, on



—THE MASTERY OF THE WORLD FOR A COUNTRY LIFE

the south the Silver and on the west the Iron. Just behind the south wall are the great halls of the Imperial quarters with a view over the Adriatic from their windows, having in the centre the vestibule, an architectural feature which is remarkable because its interior arches rise directly from supporting Corinthian columns; here for the first time in Roman architecture we find no lintel or architrave. The octagonal building behind it is the Temple of Jupiter, and the oblong shrine to its left is that of Æsculapius. Colonnades flanked both streets.

able to shake free from tradition. But in the colonnades of the interior the true solution has been reached after centuries of experiment: the architect has omitted the flat architrave, and made his arches spring directly from the columns. From this innovation dates the birth of the Byzantine, the Romanesque and, eventually, the Gothic styles of building.

Diocletian lived to occupy the palace for about nine years. They were not years of peaceful rest such as he had anticipated and merited. Scarcely had he resigned authority when the civil wars he had so painfully suppressed broke out anew between the men among whom he had divided the Empire. To us such an event seems the inevitable result of the division, but it is curious how Diocletian's scheme haunted the minds of succeeding Emperors; the Roman Empire was quite beyond the control of any single man. Less than two years after his abdication, the contending parties appealed to him to resume office and once again to save the State; this is a striking proof of the prestige he enjoyed. But he rejected the proposal, observing to the ambassadors that if they could but see the cabbages he had planted with his own hands, they would not urge him to abandon his simple happiness for the pursuit of power. This answer was probably prompted less by a love of nature than by a feeling of anger that his life work had been wrecked; but it would have been well for Rome and for him had he listened to the appeal. The civil wars continued with increasing intensity and ferocity. His wife and daughter were captured by one of the factions and barbarously murdered; and it is said that he himself committed suicide to escape insult from men whom he had originally raised to power.

After his death in A.D. 313, the palace was never again used as an Imperial residence but was allowed to fall into decay; merchants from Salona established rope-walks in the porticoes. In 639 Salona fell into the hands of Slav invaders and was destroyed and the inhabitants sought refuge within the massive walls of Diolectian's home until such time as the barbarians should depart; but finding that the intruders were like to settle permanently in the land, they obtained permission from the Court of Constantinople to abandon Salona and to make a permanent home within the now desolate palace. This was the beginning of the modern town of Spalato.

TEMPLES OF THE GODS. XX

THE TEMPLES AT JERUSALEM

By Reuben Levy

THE TEMPLES AT JERUSALEM

By Reuben Levy

Lecturer in Persian in the University of Oxford

I DO not think that any of the readers of Wonders of the Past *will cavil at this chapter being placed under the sectional heading of "Temples of the Gods"; it is a procedure that has been adopted before in the case of edifices which, while not strictly temples, were religious in character, and in this instance it is needless to say that the classification has no significance beyond mere convenience of grouping. For the rest, several views of the present site of the Sanctuary are given in Prof. Garstang's chapter on "Jerusalem under Herod the Great," and in particular it would be advisable to consult the fine reconstruction of Herod's city facing page* 894.—Editor.

1. Solomon's Temple

THE city of Jerusalem has from its foundation lain on two narrow hills running more or less north and south. The more eastern of these two hills, which without doubt was the original hill of Zion, rises to a height of 2,400 feet above sea-level, and has on the east of it the valley of the Kidron and on the west the narrow "wadi" that Josephus called the Tyropœon or "Cheesemaker's" valley. Upon it to-day is built the Haram el Sherif, "The Noble Sanctuary," sacred to all Moslems. There is a very ancient and reliable tradition that on this site lay the Temple of Herod which in its turn contained the site of Solomon's Temple. About the middle of the Haram el Sherif is the building known as the Mosque of Omar, more correctly the "Dome of the Rock," a name which it takes from a sacred rock lying under it. This outcrop of stone is roughly 60 feet long by 45 feet broad, and varies in height from between 4½ feet to nearly 7 feet. It is practically certain that this rock was the

threshing floor of Araunah upon which, we are told in the Second Book of Samuel, David raised an altar and King Solomon later placed the permanent altar of his temple.

Chapter vi. of the First Book of Kings says that in the fourth year of his reign, i.e. probably in 967 B.C., Solomon "began to build the house of the Lord." It was by no means the first place of worship that Israel had had, but it was the first permanent structure. The materials for it were collected by David, but Solomon also sent out thousands of men to hew down trees in the forest of Lebanon and to quarry great stones. The trees, after being carried to the seashore, were made into rafts and floated to the port of Jerusalem. Some of the cyclopean stones (one of them being 23 feet long) that are still to be seen in the boundary wall of the Haram more than probably formed part of Solomon's materials. The configuration of the ground, together with the description of the grouping of the royal palace and other buildings, makes it practically certain that the temple lay to the west of the "rock," where there was sufficient room for so comparatively small a building. The incomplete account of the Temple given in the Book of Kings may be supplemented by Ezekiel's vision of the ideal temple which was almost certainly in part suggested by the real building at Jerusalem.

The Temple, then, consisted of an inner core, or main building, on three sides of which was attached another subsidiary structure. The main building was rectangular and faced east and west. In length it was about 100 feet, in breadth about 33 feet and in height 50 feet. These must be taken to be the interior dimensions of the edifice. From Ezekiel it is gathered that the walls were 6 cubits or 10 feet in thickness at the base, so that the main building must have been of very solid and heavy construction, after the Phœnician style where the main architectural principle was that of the hewn rock, as might have been expected from the Tyrian builders whom Solomon engaged to help in the work. The stones used in the building were of the white limestone that abounds in the country and were ready dressed at the quarries before being sent down to Jerusalem.

For the roof of the building joists of cedar were laid across the longer walls. On these were put planks of the same wood which, in their turn, were covered by a layer of stones, or more

A MOSQUE NOW STANDS WHERE A HOUSE OF JEHOVAH ROSE IN MAJESTY FOR A THOUSAND YEARS

The summit of Mount Moriah to-day, flattened by centuries of disaster and detrition to a level platform, with all the successive temples of Jew, Roman and Byzantine swept away and replaced by a comparatively small but exquisite Moslem mosque. The Kubbet el Sakhra it is called, "The Dome of the Rock," because it shelters that rock sacred to Jews, Christians and Mahomedans alike upon which the Altar of Burnt Offering was reared in the threshing floor of Araunah the Jebusite, bought by David for fifty shekels of silver. This view is from the north-west corner.

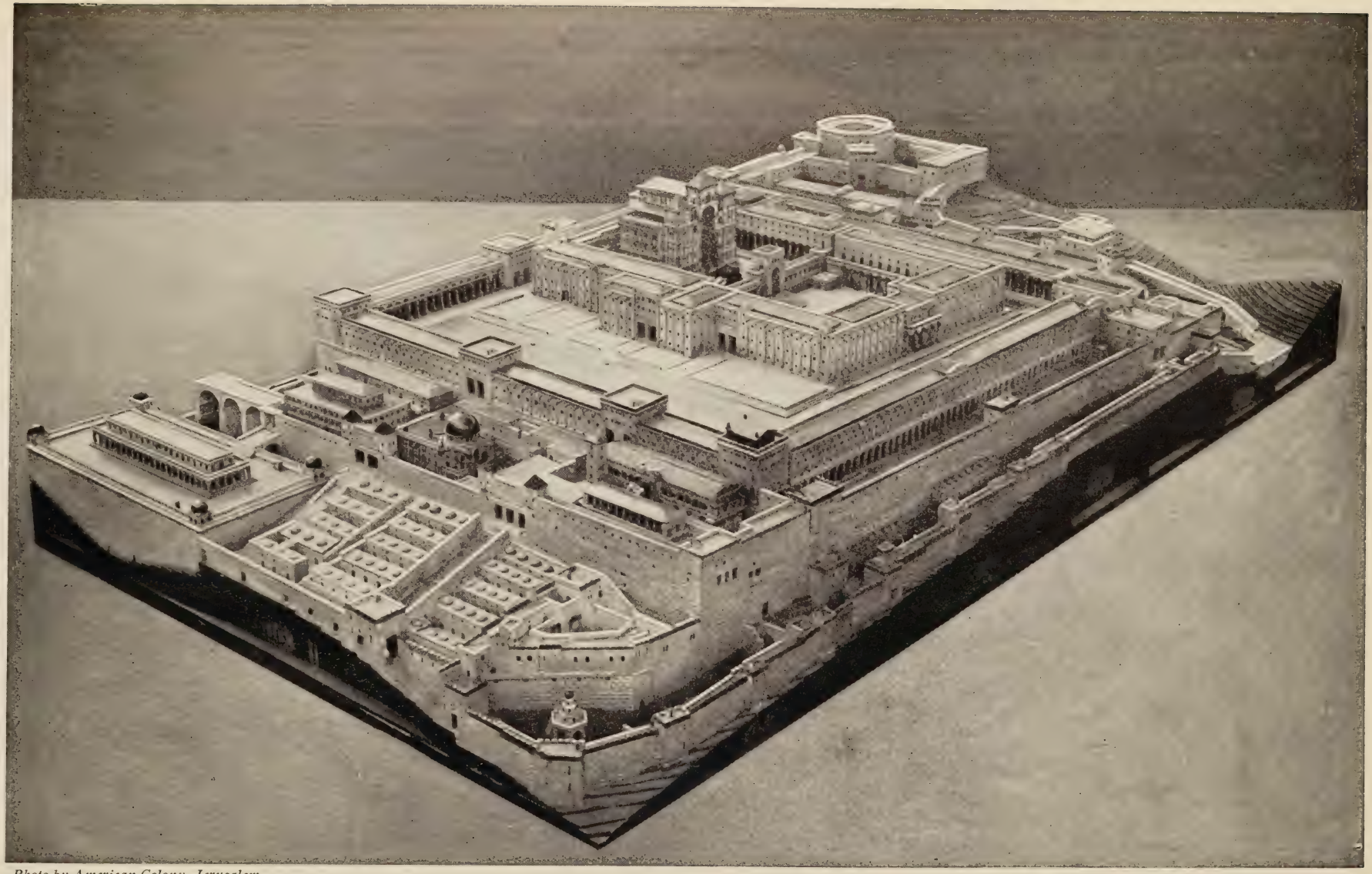


Photo by American Colony, Jerusalem.

SOUTHERN ASPECT OF KING SOLOMON'S WONDER TEMPLE AND THE BUILDINGS THAT CLUSTERED ABOUT IT

As we learn in the last chapter of the Second Book of Samuel, David built an altar on the threshing floor of Araunah as a thank offering to the Lord for having stayed a plague that ravaged Israel. But it was not given to David to build a House of the Lord, but to Solomon his son. So Solomon sent to Hiram, King of Tyre, and with cedar wood and stone and the help of skilled Phœnician workmen he reared the first fixed temple of the Jewish faith where David had raised his altar. Now the accounts in the first Book of Kings though rich with glowing imagery are architecturally meagre, rendering reconstruction difficult; and this model by Dr. Schick, an archæologist who spent 30 years examining the site, perhaps suffers too much from "back-inference" from Herod's Temple, for there is no reason to believe that Solomon's Temple was exceptionally large. Perhaps, too, sufficient prominence is not given to characteristic features of Phœnician art; while the bridge across the

probably of clay, as is the custom in all buildings in the Middle East to-day. To clear the surrounding structures, the windows must have been placed high up in the walls. Their exact construction is doubtful but they appear to have been long apertures cut through the walls, tapering towards the outside and there covered by fixed lattice work.

Upon the front of the "House" was built a porch of the same width as the main building and about 17 feet deep. Its height is not mentioned except in Chronicles which, by a possible textual error, makes it 120 cubits; this would make the porch a high tower. A number of steps led up to it, being flanked by two imposing columns of hollow bronze, Jachin and Boaz, each 6 feet in diameter and about 38 feet in height, including an 8 foot carved capital of intricate workmanship.

The subsidiary structure on the sides and back of the "House" reached rather more than halfway up the walls. It was three storeys high, each storey measuring about 8 feet in height. Here the priests and Temple officers had their quarters which must have been quite small cells; those on the bottom storey being only about 8 feet, those on the second 10 feet, and those on the top storey nearly 12 feet wide. The gradual increase in width seems to have been achieved by having the outside of the "House" wall built in a series of three steps. Correspondingly, the inside of the external wall was built in similar stages. Beams fixed across these "steps" made the ceilings and floors of the respective storeys, thus obviating the necessity for piercing the Temple wall. The main doorway to the cells was on the south side of the building and communication between the different storeys was gained by means of spiral stairs, or perhaps by ladders and trapdoors.

The inside of the "House" was entirely panelled with cedar wood while the floor was of planks of cypress. The inmost part of the building was partitioned off from the rest with cedar-wood planks to form a cubical chamber with a side of 33 1-3 feet, filling the whole width of the main building but only two-thirds of its height. This chamber was the Holy of Holies, the inner shrine in which the Deity was said to dwell. The rest of the "House" was called the Holy Place. Two colossal cherubim, winged figures of olive wood, each over 16 feet in height with wings that later covered the "Ark of the Covenant," were placed inside the

inner sanctuary. It is not known what form the Cherubim had, but doubtless they were composite figures like the winged bulls and lions made familiar by Babylonian and Assyrian sculptures. The text of the Book of Kings says that the Cherubim and the whole of the inside of the "House" were overlaid with gold. From the parallel of the Shah of Persia who, after a pilgrimage, had the domes and minarets of the shrine at Kazimain (near Bagdad) covered with thin plates of beaten gold, it cannot be said that this is improbable, but on critical grounds it is felt that the description of the overlaying with gold is, in part, a late addition to the text. No doubt is, however, thrown on the existence of ten golden candlesticks that stood before the Holy of Holies, five on each side, in the Holy Place.

Before the porch of the Temple, at a distance of a few feet, stood the sacred rock and, probably upon it, a bronze altar of enormous dimensions. Between the altar and the steps of the Temple porch was the so-called "Brazen Sea," a mighty bronze bowl over 16 feet in diameter and 8 feet deep that rested upon the backs of twelve bronze oxen. Both within and without the building were other vessels and implements, of copper or bronze, in great numbers.

A court of unknown shape and dimensions surrounded the whole. It was doubtless paved with stones and we are told that it was enclosed by a wall made of three layers of hewn stones, and one of great beams of cedar wood probably standing upright in order to form a kind of palisade. It took Solomon seven arduous years to complete the Temple and it remained the centre of Jewish national life for nearly five centuries, i.e. until 586 B.C. when Nebuchadnezzar, King of Babylon, burnt it to the ground with the rest of Jerusalem and carried off its treasures as booty.

2. Ezekiel's Temple

Among the exiles who were carried away to Babylon was the prophet Ezekiel who came of a priestly family and whose aim was to enhance the importance of Temple ritual and to ensure the exclusiveness of the priesthood. Among his prophecies is a vision of the ideal Temple in which the main characteristic is a striving after symmetry.

He sees a great plateau 500 cubits square (1 cubit equals

about 20 inches), upon which is built the outer court surrounded by a wall 6 cubits high and 6 broad. Inside each of the north, south and east walls are built ten chambers for the use of priests and to serve as store-houses and in each of these walls is a huge arched gateway, 50 cubits long and 25 broad, approached by steps.

In the centre of this court, and raised above it stands an inner court, having three gates corresponding in size and relative position to those of the outer court, with a distance of 100 cubits between each gate of the outer court and the corresponding inner gate. A flight of eight steps leads up to each gateway and attached to the outside of the gateways on the north and south are buildings for the use of the priests in charge of the Temple.

In the very centre of the inner court, which measures 100 cubits in length and breadth, stands the altar, a structure of four superimposed square platforms, diminishing in size, the lowest having a side of 18 cubits and the highest a side of 12 cubits.

To the west of the altar stands the "House," the main core to which all the rest leads up. It is on a higher level than the rest and is approached by steps. Its whole length is 100 cubits, a pavement 6 cubits wide surrounds it and its walls are 6 cubits thick. It is divided by walls into a porch 20 cubits wide by 12 deep, a Holy Place 20 cubits wide by 20 deep, and a Holy of Holies of the same dimensions, the latter approached by steps.

As in Solomon's Temple, a supplementary structure in three storeys and containing 30 cells for priests is attached on three sides of the main building, the storeys increasing in width as they ascend. Behind the Temple, and against the west wall, there appears to be another building of indefinite character but of exact rectangular shape, while all round the "House" a space is left clear of buildings to prevent the remotest contact with unholiness. Ezekiel's vision was never actually realised and no approach to his elaborate ideal was made until Herod's time.

3. The Second Temple

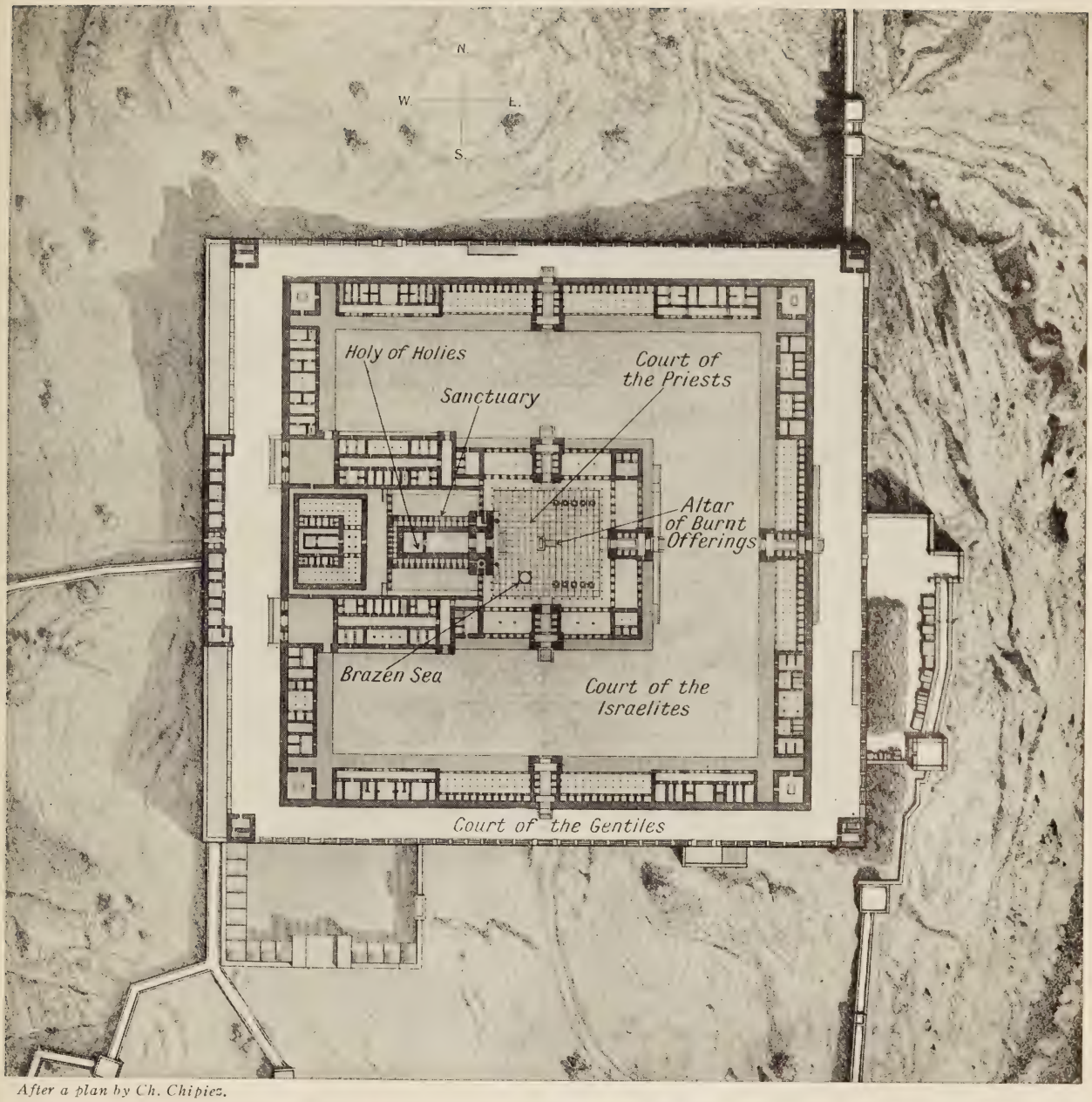
Half a century after the destruction of the first Temple, the Jews were allowed by Cyrus, the conqueror of Babylon, to return to Jerusalem and to carry with them the sacred vessels of which the Temple had been robbed by the Babylonian king.

They were entrusted to the Jewish prince, Sheshbazzar, who in 536 B.C. began the work of rebuilding the ruined Temple by restoring the altar in its old position.

The work made slow progress owing to various interruptions and it was not until 516 B.C. that it was completed by Zerubbabel, after whom it is generally called. The country was poverty-stricken after nearly sixty years of neglect, so that the purchase of materials from abroad and the use of precious metal for its adornment had to be severely restricted. Timbers were mainly brought from the neighbouring hills, and with the stones that remained on the site the work of re-erection began.

Our information with regard to Zerubbabel's Temple is scanty. Leaving controversial points and improbabilities on one side, we may assume that it was not greater in its dimensions than that of Solomon. The Holy of Holies was empty, for the "Ark of the Covenant" and the gold-covered Cherubim were never brought back. In the other part of the Temple only one candlestick was placed, and in front of the Temple the great "Rock" bore an altar of hewn stones in place of the bronze altar of older days. Numerous subsidiary chambers are mentioned, but it is impossible to say whether these were attached to the main chamber or were scattered about the courts, of which there were two, an inner and an outer. The inner court was in theory reserved for the priests and the other for the numerous worshippers that flocked to the sacred building, but in practice the people seem to have penetrated also into the inner court. More than one gateway is mentioned, but the exact description of them is unknown, though their respective positions may be conjectured. During Pompey's siege of Jerusalem a bridge leading from the sacred hill across the Tyropœon valley was destroyed, and it is likely that it had been constructed during the rebuilding of this Temple in order to provide the inhabitants of Jerusalem with an easy mode of access to their place of worship.

In later times the Temple seems to have been fortified, but that did not prevent its being plundered and desecrated by Antiochus Epiphanes in 168 B.C. This act gave the crowning impetus to the revolt of Judas Maccabeus, who on gaining the upper hand freshly adorned the Temple, set it in order and strengthened its defences by means of towers and high walls. These, however,



After a plan by Ch. Chipiez.

SOLOMON'S TEMPLE AS MEASURED IN A PROPHET'S VISION

Far more detailed than the descriptions in Kings or Chronicles is the elaborate survey of the prophet Ezekiel, enabling indeed an accurate ground plan to be constructed; but this is avowedly of a vision temple, for Solomon's Temple was then destroyed and Ezekiel was in exile in Babylonia. How far may this vision be taken in evidence for Solomon's Temple? Latest opinions give it great value, for the prophet came of a priestly family and must have been intimately familiar with the old Temple; moreover, being an exile, he would be likely to be almost passionately conservative. We may take it, therefore, that Ezekiel's is an idealised version, based on fact and aided by a retentive memory.

From a model by Dr. Schick.

HOW MAN AND TIME HAVE ALTERED THE CONTOURS OF THE TEMPLE HILL

Flat though the summit of Mount Moriah is to-day, it was not always so; extensive substructures still exist beneath the surface, and there is reason to believe that recourse was had to something of the kind from the earliest days. Moreover, the ground level has been raised many feet by the accumulated débris of ages. This model showing the original contours of the hill in relation to the buildings round it will help in realising the problems of the Temple builders.

After a reconstruction by Ch. Chipiez.

VAST PYLON OF THE SOUTHERN GATE FROM THE COURT OF THE ISRAELITES

Mighty pylons at the gateways with height twice their breadth, the mightiest of all being the one forming the porch of the Sanctuary, 120 cubits or 200 feet high. Now this is in accord with 2 Chronicles iii., 4, which has been impugned as a textual error; but it has the support of Josephus, and it may be that it was an ideal never quite realised. In any case Phœnician tomb architecture supports the existence of pylons of the same general type, whatever their size.

After a reconstruction by Ch. Chipiez.

THE TEMPLE RESTORED ACCORDING TO EZEKIEL'S DREAM

In view of the considerations enumerated in a preceding page, the French architect responsible for this reconstruction of the Temple from the north-west corner of the Court of the Israelites has followed unreservedly Ezekiel's ground plan. Far more problematical, however, is the elevation; but all known precepts of Phœnician art have been carefully observed. The low building flanking the inner court on the north, together with part of a gateway, has been left unreconstructed in order to give a free view of the great Sanctuary in the centre.

were not entirely effective, for in later years they were razed to the ground by Antiochus Eupator, and though they were rebuilt by Jewish princes the Temple Hill was again stormed by Pompey and Crassus, who plundered the Temple of the stores of gold brought to it by worshippers.

4. Herod's Temple

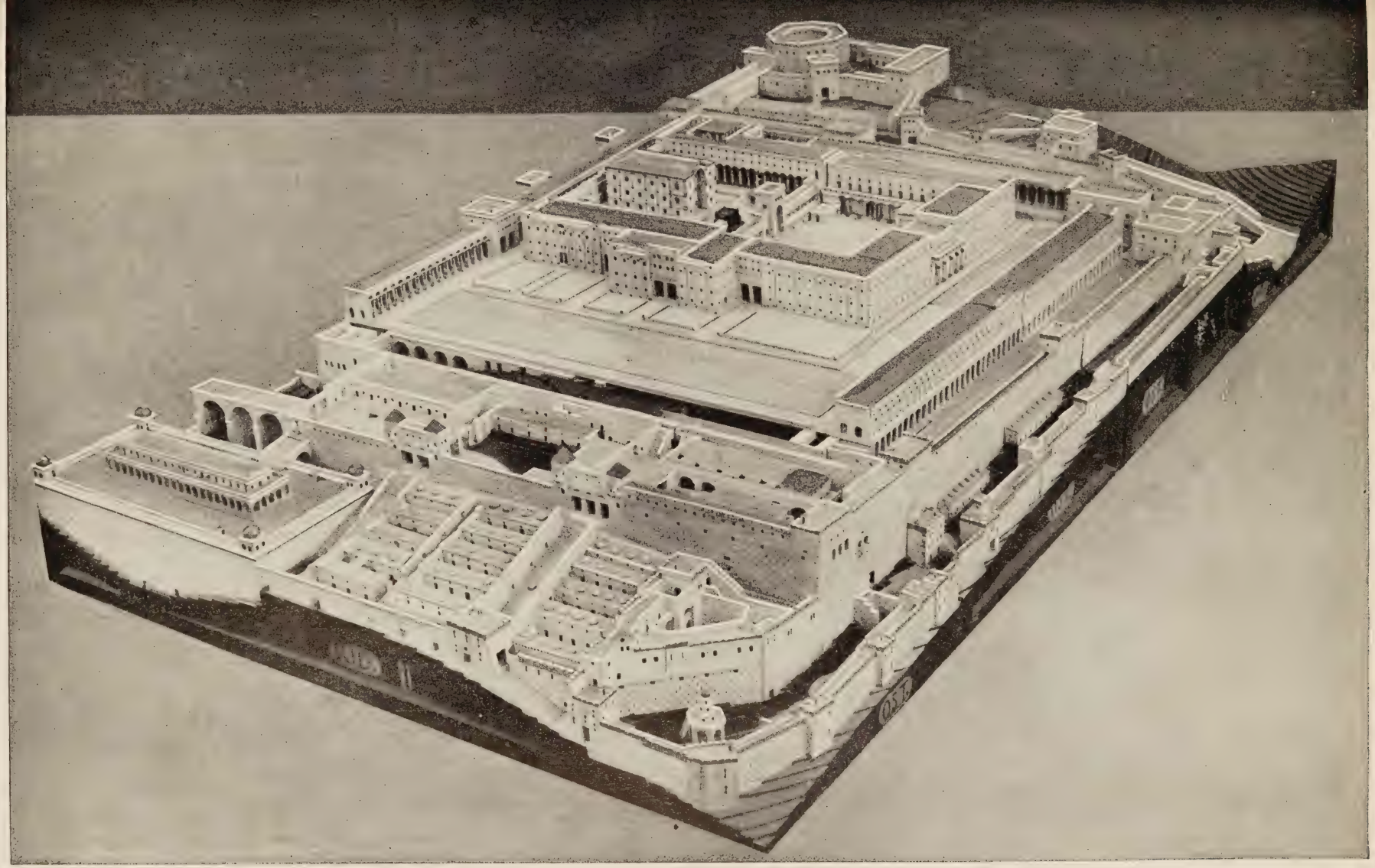
In 40 B.C. Herod, a descendant of the Maccabeans, was given the title of King of Judea by Antony and Octavius, though he was not recognised by the Jews. Three years later, in a campaign to assert his authority, he stormed Jerusalem and burnt down some of the Temple walls. In the eighteenth year of his reign (20-19 B.C.) he determined, possibly with some idea of pleasing his subjects, to rebuild the Temple in accordance with the spirit of the time and his own luxurious ideas. All secular edifices were to be pulled down on the Hill of Moriah, which was now to be covered entirely by the sacred building and its courts.

We have contemporary accounts of this Temple both in Josephus and Rabbinical works, from which we may gain an idea of the elaborate character of the work. Herod's first task was to increase the area available for his building. For this purpose he built mighty substructures on the south side, where the hill fell steeply away, and arranged the hill in a series of terraces with the actual Temple on the high plateau in the middle. He surrounded the whole rectangular area thus formed by a massive wall of colossal stones, the base of it being fairly low down the side of the hill and the enclosure being two stadia (roughly 400 yards) by one, within which circuit must be included the fortress of Antonia that stood at the north-west corner of the Temple.

Before beginning his reconstruction, Herod had to collect the materials for the Temple in order to reassure his subjects who believed that he might pull down the old Temple without the intention of building his new one. Further, in order to obviate any sacrilege, he appointed 1,000 priests who were to be taught the arts of masonry and carpentry and could undertake the work in the holy houses where services were continued, thus achieving the thought of identity of the new and old Temples that the people desired. The new building, however, was very different from the old one, particularly in the elaborateness of

its decorations and in the number and arrangement of the external courts. The old division of the main Temple into the Holy of Holies and the Holy Place was maintained, the two being separated by a "veil" or curtain. The old internal dimensions were also kept, but due proportion with the magnificence of the surrounding courts was achieved by making the walls extremely thick and 100 feet high. The walls also of the three-storeyed surrounding chambers attached to the "House" were of great thickness. Further, a great porch, wider than the rest of the building, was added on the east side. To quote Josephus (speaking of the Temple proper): "In front its height and its breadth were equal, each being a hundred cubits, though it was forty cubits narower behind, for on its front it had on each side what may be styled shoulders (wings) that passed twenty cubits farther." The whole was built of glittering white marble while the porch was covered with gold, so that the eye of the worshipper must have been caught far off; as Josephus says, it appeared at a distance "like a mountain covered with snow."

A worshipper coming from the city of Jerusalem on the western hill would cross the Tyropœon valley by a bridge—Zion Bridge—and would enter by a lofty gate into the outer court, which was 600 feet square. It was paved with stone and had all around it wide covered colonnades, supported on marble pillars over 40 feet high and pierced at intervals by gateways. On the south wall the colonnade was known as the Royal Porch and was formed by 162 colossal pillars of marble arranged in four rows, of which the two middle rows were twice as high as the rest. This outer court, or Court of the Gentiles, was open to all, but in the middle of it was another court, access to which was forbidden to Gentiles on pain of death. It stood on a raised platform 25 feet above the outer court and was reached by a series of fifteen steps, except on the west. Round the edge ran a low wall, with pillars at equal distances from each other, inscribed some with the Law of Affinity and some with notices forbidding entry to Gentiles, one of the latter notices being still extant. About 16 feet from this low wall was built another one, rising to a height of 42 feet. This had four gates on each of the north and south sides and two gates one within the other on the east side, there being no entrance on the west, where there was, however, another cloistered



After a model by Dr. Schick; photo by American Colony, Jerusalem.

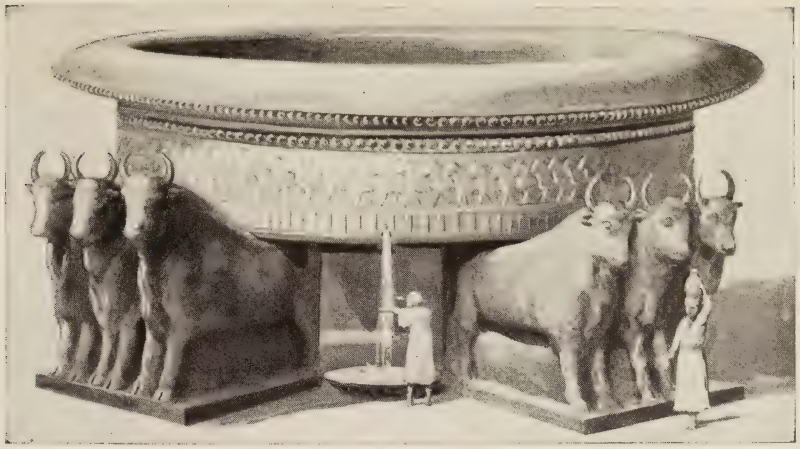
HALF REALIZED ACHIEVEMENT OF A PASSIONATE ASPIRATION: THE TEMPLE OF ZERUBBABEL

Ezekiel's dream was never fulfilled. When in 536 B.C. in the reign of Cyrus the Jews returned to Jerusalem, the rebuilding of the Temple was taken in hand; but even after 20 years of labour it can never have surpassed Solomon's Temple. Certainly no greater in size, it was far less splendid. It was Sheshbazzar who began the work by setting up again the great Altar of Burnt Offerings, but without its plating of brass; and Zerubbabel under whom the greater part of the building was completed. In all essentials the original plan was followed, but the general information is scanty; such as it is it will be found in the Book of Ezra.

After a model by Dr. Schick; photo by American Colony, Jerusalem.

NEAREST APPROACH TO EZEKIEL'S VISION: THE TEMPLE BUILT BY HEROD

It was in the very last stage of the great tragedy that the most magnificent of the three Temples was built; in 20 B.C. Herod began its construction, in A.D. 70 it was utterly destroyed so that "not one stone was left upon another." Zerubbabel's Temple had endured up to this period, but with many vicissitudes, and in 37 B.C. it was seriously damaged: so Herod, to conciliate his subjects, determined to erect a building of new and undreamt splendour. All secular buildings were cleared away from the sacred hill and the available space sensibly increased, but the same distinction as of old was maintained between the various courts, and the Sanctuary was in the same position and of the same general plan although loftier. As in the other model reconstructions, this view is from the south-east; in the background is



After a reconstruction by Mangeant.

TRIUMPH OF PHŒNICIAN CRAFT, THE MOLTEN SEA

The other great work of Hiram was the Brazen or Molten Sea; "and he made it of ten cubits from brim to brim . . . and the height thereof was five cubits. . . . It stood upon twelve oxen," three facing each cardinal point. Its purpose was to hold water for Temple use, for no spring flowed there.

Photo by Underwood Press Service.

THE OLDEST RELIC ON THE TEMPLE HEIGHT IS NOT A WORK OF MAN

To-day, after centuries of service as the base of the Altar of Burnt Offerings, the strange outcrop of rock on Mount Moriah is bare again—one of the few unquestionable links with the early days of the first Temple. Indeed tradition would make its history very much older, for it was here, so it is said, that Abraham offered up his son Isaac. Beneath it is a cave also tradition haunted but probably used as a sink to receive the frequent ceremonial scourings of the altar above.

After a reconstruction by Ch. Chipiez.

CAPITAL OF JACHIN OR ITS TWIN, BOAZ

As regards the adornments of the Temple, Solomon caused twin pillars of brass, Jachin and Boaz, to be set up on either side of the porch of the Sanctuary. They are lovingly described in 1 Kings vii., 13 and following, from which this reconstruction has been made according to Phœnician canons, for Hiram who cast them was an artificer from Tyre.

LAMPS THAT WERE EVER KEPT ALIGHT

The seven-branched candlestick of pure gold, which maintained its traditional form throughout the history of the temples at Jerusalem and was one of the most sacred objects in them—seven was the "perfect number"—is lost to us for ever; but a representation of it appears among the spoils of Jerusalem on the Arch of Titus in Rome. Here is an enlarged reproduction showing the details of its ornament.

porch. One of the two gates in the east wall gave access to the Women's Court, which was so called from the fact that women were admitted into it and could not go beyond it. It formed the eastern portion amounting to one-third of the inner court, was divided off from the rest and was on a lower level. The inner of the two gateways on the east, which directly faced the gate of the Temple itself, was a magnificent structure of Corinthian brass about 83 feet in height. It towered nearly 17 feet above the other towers and was broader by the same amount; it also exceeded them in beauty and costliness, even though they were overlaid with gold and silver. The lesser gateways seem to have been built over a square courtyard measuring 50 feet each way, from which access was obtained to rooms in the tower above. Round the walls of the inner court were numerous chambers built for storage and other purposes and in front of them, between the gateways, ran a continuous cloister on fine pillars.

In the centre of the inner court lay the inmost court, to which there was an ascent of twelve steps and which was confined to the use of the priests and Israelites presenting offerings. The Temple itself was within this court. Beyond the high altar of the "Rock" was the great doorless gateway of the "House," nearly 120 feet wide, through which could be seen the Holy Place of the Temple and the great curtain woven in symbolical colours that spread before the Holy of Holies.

The mighty work begun by Herod in 20-19 B.C. was not completed until over 80 years later, between A.D. 62 and 64. In the year A.D. 66 the great revolt against Rome broke out in Jerusalem and in August of the year A.D. 70 the Temple was burnt to the ground and utterly destroyed, on the very day—so says Jewish tradition—that the Temple of Solomon was overthrown.

ANCIENT ARTS AND CRAFTS. XIII

THE GLORY OF THE GREEK AND ROMAN THEATRE

By Professor E. A. Gardner, Litt.D.

THE GLORY OF THE GREEK AND ROMAN THEATRE

By Professor E. A. Gardner, Litt.D.

Yates Professor of Archæology, University College, London; author of "Handbook of Greek Sculpture," etc.

EVERY considerable town in ancient Greece had its theatre which was a public building constructed and kept up by the state. The performances which took place in these theatres were also organised by the state and were a part of established religious ceremony. Both theatres and dramatic performances conformed to the type which was first established at Athens in the sixth and fifth centuries B.C. and continued with slight variations throughout the classical period. The character of the building and of the performances which took place in it was therefore more or less stereotyped, and in order to understand this it is necessary to bear in mind the conditions that distinguished the ancient from the modern theatre.

In the first place, the Greek theatre was in the open air and staged upon what seems to us a gigantic scale. Plays were only performed once, and therefore it was necessary to find room at that one performance for all who wished to attend it—that is to say, in Athens accommodation must be provided for practically the whole body of citizens. The great theatre of Dionysos is said to have held 30,000 spectators, and though this may be an exaggeration, it has been estimated that some extant theatres could have accommodated no less than 16,000 to 20,000 people.

Plays were performed at Athens as a part of certain popular religious festivals in honour of the god Dionysos (Bacchus). The chief of these were the Great Dionysia held about the end of March, and the Lenaia held about the end of January. At both

alike the performances of plays were continuous and lasted for several days. Tragedies and comedies were performed at both festivals, but tragedies were the leading feature at the Great Dionysia and comedies at the Lenaia. The performances took the form of a competition. In the case of tragedy, three poets were selected who each produced a series of three tragedies and a satyric play. Comedies were usually produced singly, but here also there was a competition between three or later between five poets. To be selected to compete was in itself a high honour, and the victor received a prize which he usually dedicated to the god. The most successful actor also received a prize, independently of whether the plays in which he acted had been successful or unsuccessful.

It is evident that such a system as this implies a complicated and accepted organisation. If a poet wished to produce a play or a set of plays, he had first to apply to the magistrate to be put on the list of competitors. If he was selected, a "choragos" was assigned to him; that is to say, a rich man who undertook, as a public service, to pay the expense of training the chorus and of dresses, properties, etc. Later, these expenses were provided by the state. The poet himself trained the actors and chorus and supervised the production of the play. Only three actors took part in each play; and the distribution of the parts and entrances and exits of the characters had to be arranged accordingly. Moreover, the same three actors had to appear in a whole set of plays by one author; or, by a later arrangement, in one of the plays of each of three poets.

The reaction of these conditions on the nature of the performances, and on the theatre in which they took place, must have been considerable, and they must be borne in mind in any attempt to realise what the ancient drama was like, especially on the part of those who are habituated to the modern theatre.

The Greek theatre consisted of three essential parts: the orchestra, or dancing place for the chorus; the "theatre" in the narrower sense, that is to say, the accommodation for the audience; and the skene or scena (originally "booth")—dressing rooms and green room for the actors—the front of it serving as a background before which they appeared. The three must now be described in greater detail.

THEATRE OF DIONYSOS AT ATHENS, WHERE AISCHYLOS, SOPHOKLES, EURIPIDES AND ARISTOPHANES HELD THEIR "PREMIERES"

Lying to the south-west of the Parthenon-crowned Acropolis is the ancient theatre of the old wine god of Greece, patron of the vine. Once the centre of the great dramatic art of Greece, its situation was actually within the temple precincts; this stone building superseded previous wooden erections and was completed about 340 B.C. in the time of Lykourgos, although the permanent proscenium of which the ruins are seen on the left was not added until some later period. Girdling the semicircular orchestra, formerly occupied in the centre by the thymele (altar of Dionysos), are seen the tiers of spectators' seats all of white limestone except the lowest, carved in distinction from Pentelic marble, which was occupied as in the Roman amphitheatres by distinguished personages and priests of whom the most important was the Priest of Dionysos.

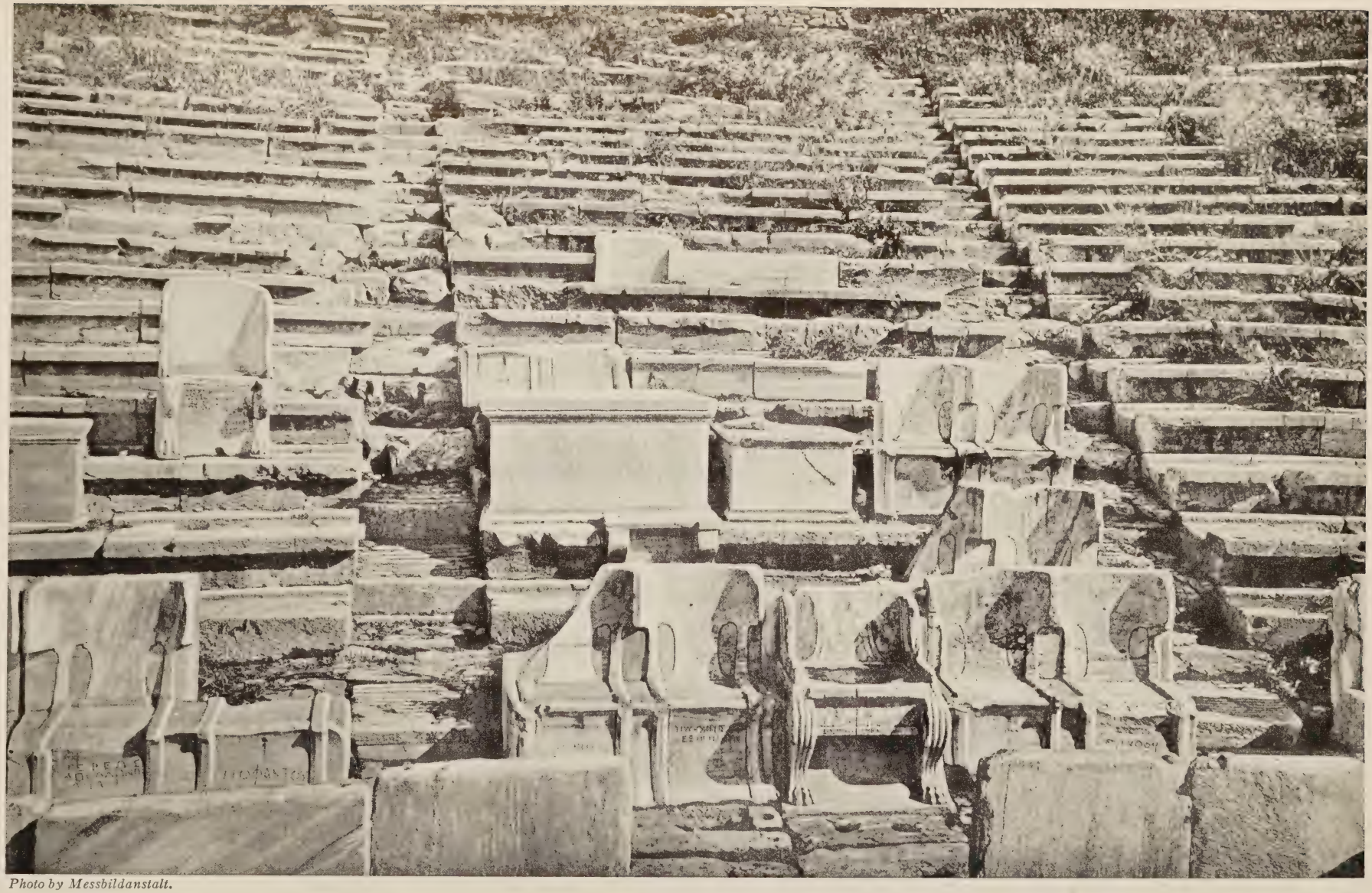


Photo by Messbildanstalt.

SEATS OF MARBLE FOR THE FAVOURED FEW IN THE THEATRE OF DIONYSOS

In a following page is a photograph showing the sculptured detail of the stall of the priest of Dionysos; seen in the centre of the middle block in this illustration, its relative position may thus be judged. At both sides of it are seen the stalls of priests of other orders; to the extreme left we read from the inscription on the seat that it was sacred to the priest of Delian Apollo; its neighbour to a hierophant (a certain priestly official); the one on the extreme right next the gangway was the property of a priest whose duty was to perform sacrifices or pour libations; all are of Pentelic marble. Remains of Roman date are seen above the priests' seats.

Photo by Messbildanstalt.

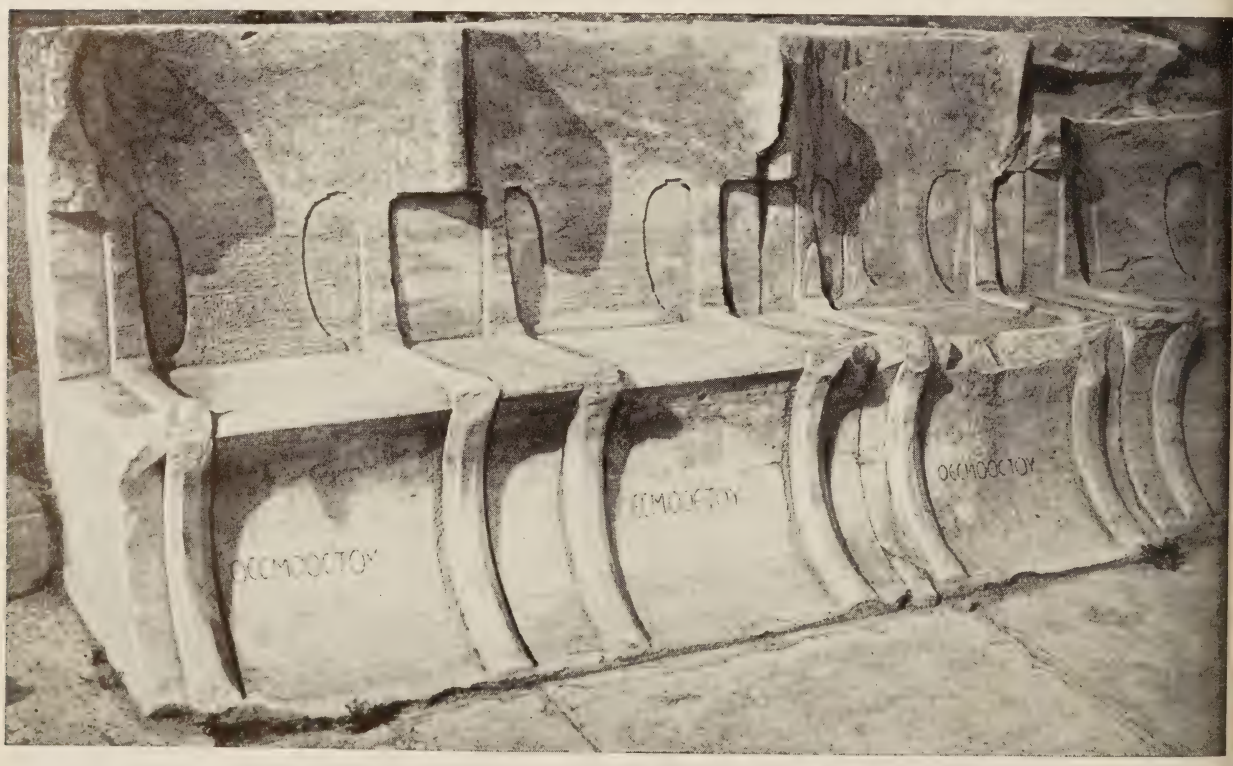
IN THE CRYSTAL ATMOSPHERE OF ATHENS THE ACTORS' VOICES CARRIED CLEARLY FROM STAGE TO TOPMOST TIER

Since its first erection as a permanent stone building the theatre of Dionysos at Athens has undergone many changes to suit the ever-changing progress of the drama; of these the most important is the reduction of the space allotted to the chorus from a large circle to rather more than a semicircle. Greek drama was at first entirely in the hands of the chorus, but as it evolved the functions of the chorus became more and more restricted, and those of the actual actors emerged in greater importance. The latest additions and changes were made in the theatre of Athens in the Roman time when the stage was reconstructed as a lower platform.

Photo by Messbildanstalt.

THRONE OF THE PRIEST OF DIONYSOS

Most magnificent of the special front row seats in the Athenian theatre was that occupied by the priest of Dionysos, patron god of the theatre, in whose honour the dramatic festivals known as the Lenaia and Great Dionysia were held, in January and March respectively. The relief, beautifully carved in Pentelic marble shows a winged Eros with fighting cocks.



FRONT ROW STALLS FOR THE PRIESTS

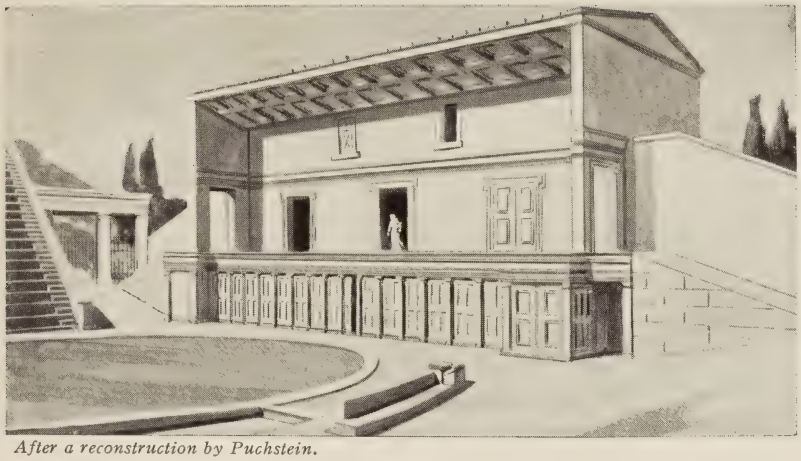
In every theatre and amphitheatre of Greek and Roman erection the first row of seats was reserved for the especial use of certain dignitaries. These were, in Greek theatres, priests, among whom the priest of Dionysos was foremost having a special stall for his own particular use; the magistrates, distinguished foreigners, and citizens worthy of special honour. This photograph illustrates four stalls in the theatre of Dionysos at Athens specially reserved for the use of magistrates and inscribed accordingly.

AT ATHENS CROUCHING SILENUS BEARS THE WEIGHT OF THE STAGE ON HIS SHOULDERS

With grass tufts growing in the interstices of the paving, the orchestra, in which the chorus performed, lies in front of the raised "logeion" or stage proper dedicated to the use of the actors only. The face of this well preserved logeion is adorned with reliefs that depict mythical scenes in the life of Dionysos (Bacchus), the patron god of the drama in Greece, who is himself seated on the extreme right; all the reliefs on this, the right side (the left side of the stage is wanting), date from later Greek times and were shifted to their present position after 200 A.D.

MASKED MUMMER OF ANCIENT GREECE

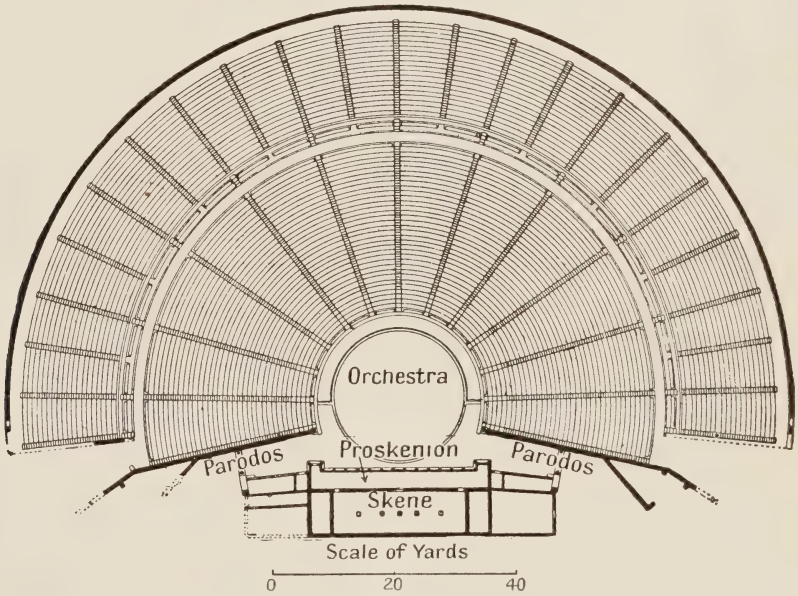
Ancient Greek comedy is arbitrarily classed in three stages: first, political satire (Old); second, burlesque of literature and philosophy in a period of political depression (Middle); lastly, the forerunner of the modern Comedy of Manners (New). This last had certain stock characters one of which is shown in this ancient statue; the lips of the actor are seen behind his grotesque mask.



After a reconstruction by Puchstein.

RESTORED PROSCENIUM OF EPIDAUROS

Of conventional type, the stage at Epidauros consisted of a building two storeys high; the logeion projected from the first floor and was supported by columns. Three doors gave on to the stage from the wall of the "skene" and entrances and exits were made by the sloping ways on either side.



PLAN OF THE THEATRE OF EPIDAUROS

At Epidauros alone is found the original fully circular orchestra which gave room for a large chorus. Rather more than semicircular is the "theatron" (auditorium), and it is divided by flights of steps into blocks of seats. The "skene" consisted of dressing rooms and stores; on either side the chorus entered by the passages marked "parodos"; the "proskenion" was the actual stage.

Photo by Messbildanstalt.

BUILT TO ACCOMMODATE AT LEAST 16,000 PEOPLE: THE THEATRE OF EPIDAUROS

Even to this day the theatre of Epi lauros merits the praise which Pausanias gave it in ancient times, as being the most beautiful in Greece. As we may remark here, almost every seat remains in situ and it is only on the wings where the supporting walls have fallen that the otherwise perfect symmetry is broken; now repairs are being carried out on these walls and the seats restored. Only the foundations of the stage buildings remain, but one can observe on the left the columns of a parodos which are still standing. How skilfully the ancient builders tackled the problem of acoustics is well evinced by the fact that a

The orchestra was originally a flat circular space surrounded by a low wall or sill. Probably it was often the local threshing floor, such as is still used in Greece for festival dances. At Athens the remains of the circular retaining wall of the early orchestra are still to be seen below the stage buildings of the great theatre; and at Epidauros the complete circular sill of white limestone surrounding the orchestra is still perfectly preserved. In such a circular space choruses used to dance before dramatic performances were associated with the dances. It is said that these originated in one man, who probably impersonated the god or hero who was celebrated, mounting on a table or platform and interchanging dialogue with the members of the chorus. As the importance of the actors increased, and that of the chorus diminished, the quarters assigned to the former encroached more and more on the orchestra, so that in later theatres the latter is no longer of circular shape. According to the prescription of Vitruvius, the great Roman architect who lived in the first century B.C., the orchestra in the Greek theatre should be limited, on the side towards the stage building, by one side of a square inscribed in the circle, while in the Roman theatre the orchestra became semicircular. The orchestra was not usually paved until later times, but consisted merely of levelled and beaten earth. The "thymele" or altar of Dionysos was placed either in the centre of it or on its border, opposite the stage building.

The seats for the audience were placed on the side of the orchestra away from the stage buildings, the bottom row of seats bordering the circle of the orchestra for half or more than half of its circumference. The middle portion of the auditorium was, as a rule, adapted to the natural slope of a hill, but it was usually necessary to extend this on either side with the help of retaining walls and substructures. The whole area usually in Greek theatres occupied more than a semicircle; in Roman theatres a semicircle exactly. And the extension of each end of the semicircle was carried out by various devices. The simplest of these, as used at Athens and elsewhere, was to prolong the circumference of the semicircle by tangents. Sometimes the circumference of the original circle was followed in the extension. Further and more involved mathematical refinements were also used to prolong the curves. The effect of these arrangements was to turn

the spectators on the two wings of the auditorium slightly away from the centre of the orchestra and more towards the stage buildings in front of which the action took place. Acoustic considerations were also probably taken into account, as throughout the rest of the design.

The seats were divided by a series of steps into wedge-shaped sections and also by horizontal gangways into two or more divisions; in some cases there were twice as many sets of steps above such a gangway as below it. The lower sets of steps varied in number according to the size of the theatre. They were usually even in number so as to leave a central seat—at Athens for the priest of Dionysos—opposite to the stage. At Athens there were fourteen, at Epidauros thirteen such gangways, one staircase being in the centre of the auditorium; at Priene there were only six.

A prescription laid down by Vitruvius, and observed in some theatres, is that a line stretched from the bottom to the top seat should just touch the front of every seat in the theatre. This was mainly for acoustic reasons in order that there should be no echo or projections to interfere with the even distribution of sound. At Epidauros the slope is a little steeper above the horizontal gangway than below it, so as to improve the view from the upper rows of seats; at the same time the acoustic properties of the theatre are in no way injured, as can still be ascertained by a practical test. Anyone speaking in an ordinary voice in the orchestra can be heard easily at any point in the auditorium, which was large enough to accommodate some 16,000 spectators.

The seats usually consist of blocks of stone divided on their upper surface into a space for a seat and a space for the feet of the spectator in the next row behind. At Athens there are also grooves on the seats, which appear to define the space assigned to each individual spectator. But as these are only thirteen inches apart, it cannot have been easy to insist on their observance. In many theatres there are also stone or marble benches with arms in the front row; at Athens there are marble thrones, the central one, that of the priest of Dionysos, being beautifully carved with bas-reliefs.

The third essential part of the theatre, the stage building, has been a matter of controversy. The difficulty lies in the fact

that, while there is plenty of architectural evidence as to what these buildings were like in later Greek times, all extant Greek plays were written during a period from which nothing but foundations have survived, and these are open to varying interpretations. It seems best therefore to begin with a description of the later Greek stage buildings. These consisted of an oblong building, two or more storeys high and divided into rooms for the accommodation of actors and properties. The first floor of this building was usually about 10 to 12 feet above the orchestral level and in front of it was a platform of the same height, usually approached by three doors in the front of the main building. This was the stage upon which the actors appeared. It was usually supported by low columns and the wall at its back, with the three doors, was usually given an elaborate architectural ornamentation, with columns and other decoration suitable to the front of such a palace as usually formed the background of a Greek tragedy. The three doors were assigned to actors entering from the palace or adjacent buildings. There were also entrances at each side—that on the right of the spectators assigned by Athenian convention to actors coming from the city or harbour; that on their left to those coming from a distance inland. These entrances were variously arranged in different theatres. In one type there were projecting wings enclosing the stage at each end and side doors in these were regarded as leading in from the outside. In another, the stage platform was continued at each end by a long slope leading down to the ground level; in a third, this platform was continued round the sides and even, at Delos, the back of the stage building. In these last two cases a more or less realistic dramatic effect was gained, since the audience could see a new actor approaching before he reached the stage or became visible to those upon it. The length of the stage was usually slightly greater than the diameter of the orchestra, which varied in large theatres from about 80 to 100 feet; its depth was only about 10 feet, and these proportions, together with the height of the stage (10 to 12 feet), have led some authorities to dispute whether the actors appeared upon it rather than in front of it. But the evidence that they did so in later Greek times is overwhelming.

It must, however, be remembered that no stage edifice built

of stone and therefore surviving to our day, can be dated earlier than the fourth or possibly even the third century B.C. Before this there existed in several theatres wooden stage buildings of which the stone foundations and sockets have been found; but it is impossible to say whether these were of the same form as the stone buildings which succeeded them. In any case they do not offer satisfactory data concerning the fifth century period during which all the extant Greek plays were written. It has been pointed out that these plays imply a close relation and even a possibility of contact between actors and chorus, such as would hardly be possible with a stage 12 feet high; but on the other hand a lower stage would offer a transitional form between such a stage and the table on which the primitive actor is said to have mounted to interchange dialogue with the chorus. In any case the front of a palace, such as is implied as a background in many extant plays, would probably be raised, on steps or otherwise, above the surface of the orchestra, and so offer a vantage ground for the actors; and some such arrangement has been found convenient in almost all modern attempts to reproduce Greek plays with some approach to the ancient conditions.

As to the scenery and properties used in Greek dramatic performances, we have a considerable amount of information. Here the conditions and conventions of the modern stage are misleading for the reasons already stated. Since several plays were produced in succession on a single day, it was impossible to set up new and elaborate scenery for each one, especially because there was no curtain to screen such preparations from the audience. The architectural front given to the stage building in later times doubtless served as a background to most plays, with the help of certain devices which we must later consider. But when the building was only wooden or temporary, the aid of scene painting was called in. Agatharkos and Apollodoros, two of the most famous painters of their time, were employed to paint scenery for the plays of Aischylos and Sophokles, and it seems probable that they devoted special study to architectural perspective. Thus they would be able to suggest, on a flat canvas or wooden screen, the colonnaded front of a palace, the usual tragic scene. For comedies what was usually required was an indication of houses, with "practicable" doors, windows and roofs,

Photo by Weigand.

PRIENE'S THEATRE IN THE SHADOW OF THE ACROPOLIS OF MYCALE

At the foot of Mount Mycale where the Pan-Ionian festivals were held are the ruins of Priene, one of the twelve cities of the Ionian league. Conspicuous among its remains is the Greek theatre, one of the best of its kind. A noteworthy feature of the building is its high "logeion" with its colonnade of Ionic pillars. The city also had among its great buildings a temple dedicated to Athene Polia designed by the celebrated Pythios whose genius also evolved the Mausoleum of Halicarnassus.

After a reconstruction by Niemann.

TROD BY THE COTHURNUS-SHOD TRAGEDIAN: THE STAGE AT ASPENDOS

Among the finest of all the great theatres raised by the Romans is that of Aspendos in the ancient province of Pamphylia, an old town whose origins are lost in the fog of pre-Hellenic antiquity. The building differs from the Greek erections in that in its construction the architects have not relied altogether on a natural concavity of the ground for supporting the seats of the cavea, these being built on arches. Many statues adorned the proscenium, and columns, Ionic and Corinthian, support heavy entablatures and pediments.

Photo from "Städte Pamphyliens und Pisidiens," by Lanckoronski.

EXTERIOR FAÇADE OF THE ROMAN THEATRE OF ASPENDOS

Of plain style and very similar to the exterior of the theatre of Orange is the back of the scena at Aspendos in Asia Minor. Wide arched public entrances are found at either side of the stage buildings; green room, dressing rooms and stores for properties are illuminated by many windows—a conspicuous row of arched ones is seen on the first floor. Let into the higher courses are projecting supports to which the masts were fixed which supported the ropes of the awnings.

WHERE THEATRE-GOING ROMANS IN SOUTHERN GAUL FLOCKED TO SEE COMEDIES

Colossal in size and richly ornate, the scena of the theatre of Orange (ancient Arausio) dominates the whole of the town. It is abundantly evident from this photograph to what large extent the Romans were indebted to ancient Greece in the planning of their theatres; for here we have the great wall of the scena pierced by three doors and on either side the doors through which the actors made their entrances and their exits. The seats of the auditorium were restored in 1894 and the building is now occasionally used for open-air plays.

Lower photo from "Baukunst des Altertums," by Noack.

THEATRE OF ORANGE, GREATEST OF ITS KIND IN FRANCE

Built below a hill on which stands a mighty statue of the Virgin, the Roman theatre of Orange yields place to no other such building in France of the Roman period in point of size and beauty. Its façade which appears in the upper photograph is 120 feet high and 340 feet long; that its structure is of the most massive nature is clear from the illustrations, yet one is surprised that the wall of the façade should be 13 feet thick. Of the tiers of seats in the interior only the lower rows remain, but careful watch is now kept against any further detrition.

TIER UPON TIER ONCE FILLED WITH A GAY CROWD OF EPIDAURIANS

In the Hieron of Epidauros, most renowned seat of the cult of Asklepios, god of healing, stands the theatre, a perfect example of the early type. Built by Polykleitos in the fourth century B.C., its main plan remained unaltered through the Roman period. A broad "diazoma" (passage) divides the auditorium which has three rows of special seats, two adjoining the passage and one next the orchestra; below are twelve divisions of seats, above are twenty-two; in the foreground are the ends of the two "parodoi."

and for satyric plays—one of which was attached to each set of three tragedies—a rocky or woodland scene. These must all, in earlier times at least, have been of a very simple and conventional character, since no lighting effects were possible and no aerial perspective was attempted. They must, too, have either remained as set through a whole series of plays, or have been such as could easily be placed in position in sight of the audience.

This simple scenery was supplemented by various devices which made no attempt at illusion, but were accepted as conventions. Thus at each end of the scene were triangular revolving prisms, with different objects painted on their three sides; and by turning these, a change of scene was understood. If it was desired to show an interior scene, there was a kind of circular platform which could be turned round so that what was on its back part was revealed to the audience. Then there was a balcony, the "theologeion," on which the gods could appear. Sometimes they were suspended in the air by the "machine," a sort of crane. An altar was necessary in some plays, and this may have been identical with the altar of Dionysos.

The dress of the actors was also conventional, both in tragedy and in comedy. Masks appropriate to the various parts were worn over the head, and these added to the apparent stature which was also, in tragedy, increased by high-soled boots; richly decorated robes were in accordance with the sumptuous setting of the whole. In such conditions, which were also suitable to the great size of the theatre, it is evident that there was no scope for play of features or for rapid action, and that impressive declamation with slow and stately gesture was necessary, at least in tragedy.

The Roman theatre was essentially of the same character as the Greek. The main differences were as follows: the auditorium was usually built up entirely on supporting walls and arches, instead of using a natural slope for this purpose; the orchestra was semicircular, and the entrances to it at each side, between auditorium and stage, were arched over and not open as in the Greek theatre. Since the orchestra was no longer required for the evolutions of the chorus, seats were placed in it for distinguished spectators; and, as a natural consequence, the stage was reduced to less than 5 feet high. The depth of the Roman

stage was much greater than that of the Greek, because all performers had to appear upon it. In many Roman theatres the stage building is well preserved, notably at Orange in France and at Aspendos in Asia Minor; it is of a height about equal to that of the auditorium and has rich architectural decoration.

Alike in the Greek and in the Roman theatre porticoes were added, both at the back of the stage building and round the top of the auditorium, so as to offer shelter to the spectators in case of sudden storms; otherwise there was no protection against sun or rain except in the case of some Roman theatres which were provided with awnings.

By permission of the Society for the Promotion of Hellenic Studies.

FEATHER-DIGHT CHORUS IN THE "BIRD" DANCE

In the British Museum is a vase on which are portrayed figures of the chorus attired as birds, wearing feather-covered skins and bearing wings on their arms. They serve to illustrate the costumes employed in such a play as the "Birds" of Aristophanes, though the vase dates to seventy years before the play was written.

Berlin Museum.

DASHING CAVALIERS OF THE GREEK COMEDY

Mounted on horses, to our sophisticated eyes rather suggestive of the steeds of Christmas pantomime, the knights of the chorus advance in time to the music of the flute; the attire of their bearers consists of skins with horses' heads and tails. Aristophanes, "Knights" may have been costumed thus, though, as above, this vase (now in Berlin) is earlier in date.

Photo by Alinari.

THE ANGRY FATHER AND THE CRINGING SLAVE

Typical of a play of such an author as Menander or perhaps even of Plautus or Terence is this relief, now in Naples, depicting an episode in the action of one of the New Comedy plays. Strangely masked are these figures which may be putatively recognised as the servant with the "mistress" on the right and the parents on the left. In the centre a boy plays the pipes.

Constantinople Museum.

EURIPIDES AT THE FEET OF DIONYSOS GIVES A CHARACTER TO THE STAGE

First heard of in boyhood as a cup-bearer to a band of Athenian dancers at the Thargelia, a festival of Delian Apollo and Artemis held in May, Euripides became in later life the greatest of all the Greek tragedians and such of his plays as "Iphigenia in Tauris" and "Orestes" have a greatness that is appreciable in all ages of the world and have inspired many works in Italian, French and English.

After a reconstruction in "Architektonische Einzelheiten," by D'Espouy-Joseph.

THE MAGNIFICENT THEATRE OF ROME'S SHIPPING COMMUNITY

In the article on Ostia will be found several photographs of the theatre of Ostia as it is now; what it once was like may be well judged from this restoration. A rich proscenium with statues and columns formed here the background for such plays as Plautus' "Boastful Captain" and Terence's "Self Tormentor." From the mosaic paved orchestra rose the auditorium in two main divisions. Note the masts above for awnings when the sun was hot.

A SHINING GEM IN AN EXQUISITE SETTING: RUINS OF THE THEATRE OF TAORMINA

It strikes one as peculiarly fitting that Sicily, that little Mediterranean island whose part in the origin of the drama was such an important one, should possess the most wonderfully situated relic of the ancient theatre—a mere glance at this photograph suffices to reveal the peerless, commanding position and the beautiful surroundings of the ancient building. The well preserved ruins of stage buildings and colonnaded proscenium which we see here are Roman, though they were but a restoration of a still more ancient theatre dating to the days when the island was the undisputed terrain of the colonists of Greece. Formerly there were forty-five of these fine Corinthian columns, and the niches of the proscenium held statues. In the background is Mount Etna.

TEMPLES OF THE GODS. XXI

ROME'S STRANGE TEMPLE UNDER-GROUND

By Mrs. Arthur Strong, D.Litt., LL.D.

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By Mrs. Arthur Strong, D.Litt., LL.D.

Assistant Director, British School of Archæology in Rome; author of "Roman Sculpture from Augustus to Constantine," etc.

Illustrated with photographs supplied by courtesy of the Italian Government

WE should have to go to Egypt to the Tomb of Tutankhamen, or to Crete to Sir Arthur Evans's excavations of the Palace of Minos, for a discovery as sensational as that which in the spring of 1917 revealed the existence of a large subterranean structure close to the Porta Maggiore at Rome. As it lies 50 feet below the main lines from Rome to Naples and Pisa its discovery was nothing short of a miracle. It was the unexpected sequel to a threatened displacement of the soil of the embankment which the railway engineers were at first at a loss to account for. While probing the ground in every direction they came upon a narrow circular shaft or light well through which they penetrated into a corridor, and thence through a hole into a large hall measuring 12 by 9 metres, which was filled with earth to two-thirds of its height and covered with well preserved stuccoes. Systematic clearance of the site soon disclosed an apsidal chamber of basilican plan, divided into nave and aisles by two rows of massive pillars, and approached precisely like a Christian basilica—by a square atrium or pronaos. In fact, were it not for the purely pagan character of its stuccoes, the building might be taken for a Christian basilica of primitive type erected underground in days of persecution. The resemblance to a church is still further emphasised if we accept the marks of attachment against the wall of the apse as evidence that a seat for an officiant priest once stood here, somewhat like a bishop's throne within a chancel. That a building possessing the essential features of an

early Christian basilica should have existed in pre-Christian Rome came as a surprise. Recent investigations, it is true, had prepared archæologists to look for the prototype of primitive Christian churches in those apsidal halls with nave and aisles which had sheltered the mystery religions of ancient Greece—more especially those connected with chthonian of underworld worships; but no one, up to the time of the Porta Maggiore discovery, had ever dreamt that the basilican plan, perfect in all its main aspects, had been evolved by paganism before passing into Christianity.

It is evident that the new hypogeum, which represents so advanced a phase in the development of the religious basilica, must itself have served a purpose similar to that of the halls from which it derives. In the apse are two sacrificial pits and it is reasonably assumed that the skeletons of a pig and dog, found interred close by, were originally sacrificed over these pits on the day of consecration. Beside the impluvium of the atrium, likewise, the bones of a second pig were found. Dog and pig being animals sacred to the gods of the underworld, we shall not be far wrong in assuming that the basilica was devoted to a ritual of the dead, but that like so many sanctuaries of the kind it offered individual salvation to its devotees by means of initiation. Though it was emphatically not a tomb (the sacrificial remains preclude the notion), it may yet well have been sunk deep under the earth to suggest resemblance to a tomb, that those who penetrated through the long gallery into the atrium might have the sensation of entering the grave and of passing from it into the abode of the Eternal Light, even as Virgil leads his characters through the gates of the underworld into the Elysian fields beyond.

The basilica, it must be borne in mind, was not buried naturally in the course of centuries, but is a real hypogeum, sunk deep into the soil from the first. The manner in which it was apparently built is best told in the words of Signor Gatti, the celebrated Italian archæologist who is responsible for the theory of its construction. "It must have been constructed," he tells us, "by excavations in the virgin soil above, corresponding in size and shape with the intended walls and pillars. These trenches and pits were then filled with the concrete ('selce') of which the

ROME'S DARK MYSTERIOUS TEMPLE OF A FORGOTTEN FAITH

Among the sensational archæological finds that added a lustre to the otherwise all too sordid years since 1914, one of the least known but most interesting is that of the underground basilica of a mysterious religion which was discovered in Rome in 1917. Shaped in rectangular form and with walls of "selce" concrete, the great hall has on both sides three square pillars; and here we look from the entrance into the rounded apse at the opposite end where is found the symbolic frieze depicting the baptismal immersion of the soul on its voyage to the Isles of the Blest. The white floor mosaic is relieved by parallel black lines.

WINGED AND LIGHT AS AIR BUT IMPRISONED UNDERGROUND

Beautifully executed is this stucco with its winged, girlish figure—probably the soul freed from its bodily fetters. The subject is treated so skilfully that one would seem to see the ripple of the diaphanous garment. In such pagan relics we trace the origin of Christian angels.

DEATH THE RAVISHER

Common in Roman tomb decorations is this scene—the rape of one of Leucippus' daughters by Castor or Pollux. In outstanding contrast to the radiant abandon of ascendant Ganymede on a later page are the fear-stricken gestures of the girl whose ravisher symbolises untimely Death.

MARSYAS PAYS THE AWFUL PENALTY OF HIS RASHNESS

Playing her flute one day, the goddess Athene caught a glimpse of her distorted features in a stream, and being disgusted thereat impulsively threw away her flute. It was found by Marsyas who discovered, to his delight, that the instrument, being under Athene's spell, played of itself the most heavenly music. So entranced was Marsyas that he challenged Apollo to a musical contest to be judged by the Muses, Apollo playing the cithara and Marsyas his flute. Only by adding his voice to the music of the cithara did Apollo eventually win; and terrible was his retribution, for he had Marsyas bound to a tree and flayed alive. Such is the gruesome tale of this Basilica stucco that rebukes the foolhardiness of defying the gods.

STRANGE SIGNS OF AN ENIGMATIC CULT

In the left nave is found a series of reliefs, all having a tree as a common subject; from these, authorities have been disposed to think that the religion of the shrine had some connexion with the East, where the tree and bætyl (sacred pillar) were worshipped. The gnarled pine above is united to the bætyl by a scarf.

whole building, as we have it, is in fact composed. The barrel vaulting and arches seem to have been similarly built over a centring provided by the virgin soil. Such a theory would account for the irregularity of the lines of the walls and the lack of any symmetrical relation of the pillars to the main axis of the building."

The first aspect of the basilica after the earth had been carted away must have been that of a rock-hewn chamber; the rough surfaces would next be worked over and plastered, and finally faced with the fine stucco work that makes the basilica one of the wonders of the ancient world. The quality of the concrete, a pure "selce" without any admixture of fragments of tiles or other rubbish, enables us to date the building before or about the middle of the first century A.D. This date is confirmed by the style of the floor mosaics, of the stucco decorations and of the wall paintings of the atrium. The nearest parallels of the same period are the celebrated Roman house discovered near the Villa Farnesina on the right bank of the Tiber, which was likewise richly decorated with stuccoes, and the elaborately painted Roman tomb of the Villa Pamfili-Doria.

Owing to a threatened collapse of the soil, the long corridor which led down to the basilica by a gentle gradient could not be completely explored, and its upper entrance has not been found. What is accessible runs parallel to the north wall of the main chamber, turns at a right angle below the light well, and enters the atrium on the left. The gallery was probably lit at intervals by light wells similar to the one through which the engineers had originally crept, and numerous fragments of mosaic and stucco—too minute, however, for reconstruction—show that floor and walls were of a style similar to those of atrium and basilica. The atrium has a fair-sized skylight, the funnel shaped shaft of which was faced with good reticulate brickwork ("opus reticulatum") of mid first century date. Immediately below the skylight is a square "impluvium" to catch the rainwater which was carried off through a pipe on the left. The floor is covered with a fine mosaic pavement of first century character composed of a simple pattern of black lines on a white ground.

The decoration of walls and ceiling, though much damaged, is of the utmost delicacy. It is partly carried out in paint and

partly in stucco, which is likewise occasionally coloured. Thus the atrium must have offered a vivid contrast to the inner chamber of the basilica which was left entirely white. Owing to their condition, the subjects represented in the atrium are now difficult to determine; on the low crimson dado we distinguish a group of birds pecking at fruit, closely studied from nature, but used here, as so often on gravestones and in tombs, as symbols of the soul eating of the fruit of the tree of life. Immediately above the dado a series of miniature landscapes in very low relief display the theme of the "sacred grove," with tree and pillar enclosed within a low balustrade. These enclosures—a well-known feature of sepulchral art—doubtless represent the tombs or shrines of personages held in special veneration by the devotees of the basilica. The lovely theme which is resumed in the principal chamber encircles the building as if in a ring of protecting presences. Finally, the cove of the ceiling, around the skylight, is decorated with a series of medallions and panels: among their subjects we note Mænads riding on panthers—well-known symbols of the ascent of the soul; figures of Eros chasing the butterfly, in other words of Love pursuing the soul; mystical winged figures holding the vase of life, and other allegories that attune the mind to the lofty symbolisms of the beautiful stuccoes in the larger inner chamber.

Immediately in front of us as we enter this chamber are the foundations of the ancient altar. They resemble in outline the skin of an animal with the four paws extended, and it is quite possible that the altar preserves in its shape the memory of days when the living sacrifice of animals was the rule. The gaps in the mosaic pavement between the pillars and in front of them suggest that stands for statues—or more probably for candelabra—were let in here; while lamps must have hung from the chains for suspension which have left their marks on the stucco of the arches that connect the pillars. The basilica, indeed, must have needed all the artificial light which it could get, since it had no windows save the one over the door through which an uncertain light filtered from the atrium.

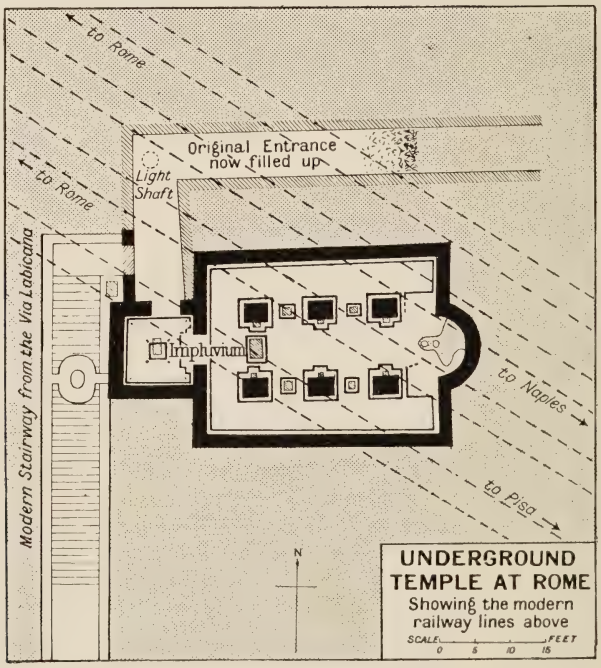
Altar, pillars and stands are ornamented by a double line of black mosaic the irregularity of which was possibly introduced to distract attention from the irregularity of the ground plan. The

LEADER OF THE ARGONAUTS IN HIS BOLDEST ENTERPRISE

Assuredly mythology was never more graphically illustrated than it is in these subterranean frescoes. Here is the bold Jason on the magical platform in the act of securing the Golden Fleece while Medusa by her magic power lulls to sleep its baleful guardian. The legend symbolises the hardships man must undergo in order to attain to the blessed after-life.

GANYMEDE IS BORNE ALOFT

Seen occupying the centre of the ceiling in a preceding page, this relief illustrates the carrying off by a winged genius of Ganymede, most beautiful of mortals, to be cup-bearer to Zeus, and typifies the soul's ascent to the gods. The figures are vigorous and finished with consummate care.



lines that run parallel to the walls are continued as far as the apse, where they turn inward again and are brought across the apse as if to mark this off from the body of the hall as a place of peculiar sanctity. The value of this dividing line is that of the altar rail between chancel and nave in a Christian church, or—to go back to Crete and to the second millennium B.C.—of the low balustrade that in certain houses at Cnossus shuts off the recess which, like the apse of our basilica, curtained a priestly seat.

But the glory of the building lies mainly in the transcendental vision of spiritual experience afforded by the reliefs that cover the ceilings and the walls in such extraordinary profusion.

The supreme object of initiation is at once recalled by the bearded mask of Ocean that appears on the inner surface of the entrance wall above the door, where it stands for the watery element through which the Soul must pass on her journey to the Isles of the Blest. Then on either side of the doorway are figures of Victories; and the Victories in varying attitudes, with wings folded or unfolded, with arms raised in prayer or holding wreaths, are repeated throughout the building wherever an available space occurs, while below the shell of the apse a stately Victory with half folded wings stands statue-like on a pedestal holding a wreath for the initiate soul. This chorus of winged messengers gives us the key to the whole imagery of the basilica and seems to proclaim that initiation into the holy mysteries robs death of its terrors and is the pledge of final triumph.

The symbolic and eschatological significance of the whole decoration follows as a matter of course: the figures of Eros holding torches or pursuing the butterfly; the scenes of rape like that of Ganymede in the central panel of the nave ceiling; those of liberation—for choice the "Rescue of Hesione by Hercules"—of another panel; others taken from the labours of the heroes of Greek mythology; the scenes of reunion—the "Orpheus and Eurydice" and the "Orestes and Iphigeneia" of two companion panels—these all belong to a well-known cycle of subjects symbolising the aspiration of the soul towards the divine, the suffering incident to her quest, her liberation from earthly ties and her final flight towards the celestial spheres.

In the same way the long series of sacred enclosures begun in the atrium and completely surrounding the walls above the

dado; the scenes of preparation and of ritual discipline; the decking of altars or readings from the sacred liturgies; the doctrine of a purgatorial "katharsis" (purification) conveyed in the story of Alcestis; the scenes of cultus and initiation; the tending of the chthonian snake and the mystic dance of the initiates; the figures interpreted as "Orantes" or prayers personified and thus made permanent; the portraits of former saints and sages introduced to help aspirants by the force of example; the candelabra, the vases, the tables, the palms, the ritual hoops and tambourines and other sacred utensils—all these again recall the rites by means of which mortals might be initiated while still in this life to the bliss of the next.

The leit-motif of the decorative scheme may be said to be triumph and victory; but the more sombre note of impending punishment meted out to the sinner also makes itself heard. Thus the punishment of Marsyas, who dared to challenge Apollo to a musical contest, is the subject of a long frieze, where it serves as a warning to mortals not to presume to set themselves against the gods. Again a scene showing girls carrying water in broken pitchers—the Danaides of later mythology—is used here as it was by Polygnotus in fifth-century Delphi to represent the fate of those who neglect the succours of initiation.

In order to understand all this it is unnecessary to have recourse to highly coloured theories—to represent the basilica as the seat of the fanatical religion of the Baptae of the obscure Thracian goddess Cottyto, or even as that of a Pythagorean or an Orphic brotherhood. All sepulchral imagery by the time of the Empire was, it is true, deeply entinctured with Orphism, but the subjects of our stuccoes offer nothing strange or unique, nothing that is not perfectly familiar from the contemporary art of innumerable Roman tombs. What strikes our imagination and must certainly have struck that of anyone who entered the basilica in antiquity, is to find so large a number of these subjects (their number is, I believe, about 117) so linked together as to cover the whole building with a perfectly logical and homogeneous decoration. We are here in presence, as it were, of a figured chart of the adventures of the soul in her search for the divinity.

As in a primitive Christian church so in the basilica, the sub-

jects represented in nave or aisles reach their climax in the grand apocalyptic vision unfolded in the shell of the apse. This important composition deserves to be described in detail, especially as owing to the damaged condition of the stucco the photographs are not satisfactory.

The foreground represents a stormy sea that beats between two rocky promontories. The one on the right is crowned by a grove of trees; in front of this a love god gently pushes forward a heavily veiled woman who holds a lyre pressed against her left side. She is in the act of descending from the rock into the sea, where a Triton holds a sheet folded boat-shape in readiness to receive her. A second Triton turns towards this group blowing his horn. In mid distance, on a third lofty promontory or rock, is seen the image of Apollo holding out his right hand as if to welcome the veiled lady. On the promontory on the left a male figure sits in an attitude of deep dejection.

From the first this scene has been interpreted as an allegory of the soul's voyage to the Isles of the Blest. Of the many ways of voyaging to the other world, that by boat or ship is the commonest; and it might reasonably be supposed that the drapery held by the Triton was merely a similar vehicle of transit. On this theory the apse picture would only be the expansion of the idea already indicated by the mask of Ocean over the doorway. But the idea expressed in the apse is a richer one, I believe, than the mere voyage of the soul. Without entirely excluding this notion, it yet seems more correct to interpret the quiet and stately descent of the veiled lady into the water as an act of ritual preluding the last journey and confirming the initiate's right to a blessed after-life. Like certain great heroines of Greek legend —like Ino-Leukothea or the Cretan Britomartis, or again like Sappho the poetess in the older version of her death, the veiled lady descends into the sea to obtain immortality and undergoes an ordeal by water to prove her right of voyaging to meet the god of light. She holds the lyre as the sign of her salvation for the same reason that figures are shown with a lyre on innumerable Attic funeral vases, where already in the fifth century B.C. its significance was that of participation in the choir of the Blessed; in fact, it would be legitimate to speak of the "lyre of apotheosis." And because she has been initiated the lady

descends from the rocky promontory without fear, certain that, assisted by Love and received by the kindly Triton, she will sail in all safety to her celestial home—if we may thus paraphrase the fine euphemism "navigare ad patriam" used by S. Cyprian to signify death.

The man seated in deep dejection on the left, with his head resting on his hands, is the soul who, like the foolish virgins, has neglected or failed to be initiated into the holy mysteries and who, when his last hour comes, sees no love god at hand to assist him nor Triton ready to convey him to a happier shore. The two contrasted episodes, symbolic of the different fate that awaits initiate and non-initiate, are admirably combined in a sort of Last Judgment, to serve both as encouragement and as a warning to the devotees of the basilica.

To complete our impression of the rites commemorated in the stuccoes we must imagine, with M. Cumont, the Belgian scholar who has done so much to throw light on the ceremonial of the basilica, that at certain hours a priest, long-robed like the Orpheus of Virgil, occupied the throne of the apse and intoned in presence of his assembled flock passages from the liturgy in confirmation of their faith in a doctrine of a blessed after-life.

One question forces itself upon us in conclusion as to the ultimate fate of the basilica. Was it merely forgotten in course of time, falling a prey to the oblivion which overtook the shrines and sanctuaries of Paganism after the closing of the temples by Imperial edict under Theodosius the Great? Or was it suppressed soon after its erection, in one of those religious conflicts which agitated the Roman Empire from the first century onwards? The perfect preservation favours the second view. Moreover, the fact that no coins, no small bronzes, no fragments of any kind whatsoever have been found on the spot, induces us to suppose that the basilica was never quite finished, and though probably in use that it had not received its full complement of ritual furniture and other accessories when, for some reason now unknown to us it was closed in the same way that at Pergamum the worship of the Eleusinian gods seems to have been suppressed about the middle of the first century and not renewed until the time of Hadrian. But our basilica was never reopened, and was probably soon forgotten; for the Roman State had small use

for other-worldliness and viewed with distrust any religion that exhorted its adepts to expect a life beyond, where earthly rulers and institutions had no significance.

The view adopted above as to the manner in which the religious life of the basilica probably came to an end is mainly that of the Dutch scholar, Dr. Leopold, who has supported it by solid argument. At the same time, it is only fair to add that the Italian authorities continue to hold that the basilica had been already discovered and looted at least once in the Renaissance or later, and they make previous excavators responsible for the complete lack of small objects. But the present writer knows of no example of excavators or looters making so clean a sweep of even the smallest fragment and leaving behind them no trace of their doings.

The Porta Maggiore Basilica is likely to occupy scholars and archæologists for many years to come, and is certain to remain a goal of pilgrimage for all who care for the art and religion of ancient Greece and Rome. Few pagan temples or shrines retain in so high a degree their original atmosphere of sanctity, unsullied even by the inevitable intrusion of the modern element. The long modern staircase from the new entrance on the Via Labicana forms an approach scarcely less impressive than the now partially blocked-up corridor; the electric light, skilfully disposed and manipulated, throws the subjects of the stuccoes into a sharp and almost dramatic relief which the ancient worshippers here can scarcely have known; while the intermittent rumbling of the trains overhead, simulating as it were the peals of distant thunder, contributes to the feeling of awe and mystery that envelopes the visitor to this strange and secret edifice beneath the ground.

THE WONDER CITIES. XXVI

SYRACUSE: ANCIENT EUROPE'S FINEST CITY

By J. A Hammerton

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TOWARDS the end of the third century B.C. Sicily must have had the appearance of an earthly paradise, with her famous city of Syracuse as its gateway. After a struggle lasting some four hundred years the whole island had been freed from the terror of the Carthaginians and on the fragrant hillsides above the blue sea happy shepherd boys piped in a golden age of pastoral pleasure; and yet this was the real beginning of Sicily's decline, as Rome who had helped the native Greeks to eject the Carthaginians remained eventually to make all Sicily a Roman colony and the Syracusans, no longer harried by cruel enemies established in other parts of the island, insensibly sank into the easeful life which breeds decay. But there was a brilliant era of social progress before any evidence of decline could be detected and with this period of her most varied history are we chiefly concerned.

Out of their picturesque ways and their broad, melodious Doric speech the Syracusan poet, Theocritus, had made the last fine movement in Greek poetry. Weary of the Alexandrian court he had returned to his native town and among the upland pastures and woodland ways he found the pastoral inspiration for his admired "Idylls." After him had followed, also from Alexandria, his younger fellow townsman, the man of science, Archimedes. In the train of these supreme Greeks, masters of art and wisdom, came numerous Hellenes of other clans attracted by the brilliant congenial company that had gathered about King Hiero II. of Syracuse.

It was like the old times under Hiero I. in the fifth century and under the Elder and Younger Dionysius in the fourth century, when Æschylus, Pindar and Plato were drawn to the court of Syracuse. In that period the Sicilian capital had with Spartan aid shattered the fleets and armies of Athens; now, with Roman help, she had beaten her older rival in commerce, Carthage. In both cases she dazzled her helpers and captured the mind of the Mediterranean by the regal splendour she displayed in victory.

Great were her uses of advertisement. Her life rested on commerce rather than industry. To her, prestige was everything. Alike by her geographical position on the south-eastern shore of the wheat-growing island of Sicily, which was the centre of Mediterranean traffic as men sailed in those days of timorous seamanship, and by the kind of business in which she had specialised as a colony from Corinth, she was the merchant broker of the midland sea. Her sharp-witted, talkative people took, as a rule, little interest in domestic politics. What best suited the powerful class of merchants was a strong dictator with enlightened views who saw to all the work of government and left them free to push trade abroad. So while the victorious Romans enjoyed their newly won sea power in a military way, their allies the Syracusans likewise profited by the success over Carthage in expanding their merchant fleets.

It should be remembered that Rome at this period of the Republic would be small and unimposing as compared with the splendid city it later became in the time of Augustus; and even though it was "no mean city," the seat of a vigorous power only now awakened to its glorious possibilities of expansion, Rome would contrast badly with Syracuse which it was fated to dominate. No city in ancient or modern Europe is thought to have equalled her in uniting extent of ground with exquisite architectual grandeur. It was, perhaps, a matter of personal taste whether her severe Doric buildings were finer or less fine than the varied and ornate fanes and monuments of Athens. They lacked the Pheidian perfection of sculptural ornament; on the other hand they included many examples of grand Dorian work of the sixth century which some connoisseurs, represented in recent days most notably by Renan, esteemed to be the height of

WATERS OF ARETHUSA, GUARDIAN NYMPH OF SYRACUSE

Pursued by the river god Alpheios in distant Elis, the nymph Arethusa plunged underground and reappeared by the seashore in Ortygia, the original Syracuse, changed by Artemis to a flowing spring. Such is the legend woven about this ancient fountain that supplied the dwellers on Ortygia with water. It is now enclosed by a semicircular wall and in its waters, turned salt since a recent earthquake, papyrus grows and sleek fish swim to and fro. The head of Arethusa appears frequently on Syracusan coins.

BUILT BY DIONYSIUS AND STRENGTHENED BY THE GENIUS OF ARCHIMEDES

The strategic importance of the westernmost part of Epipolai, the mainland height to which Syracuse spread from Ortygia, was appreciated as a result of the Athenian campaign during which the best part of this commanding plateau was captured. As a result the wonderful fortress of Euryalos was built with its system of fosses and passages cut in the solid rock. Here is a sally port into one of the fosses, with the piers of a drawbridge that once spanned it in the background.

Photo by Autotype Co.

BEAUTY MASKING TRAGEDY IN A SYRACUSAN STONE QUARRY

Of incomparable beauty, their sheer sides draped with fern and the tumbled rock masses in their centre ablaze with bougainvillea and gorgeous creepers beneath the Sicilian sun, the "latomie" or quarries of old Syracuse are yet grim with memories of human anguish; here it was that the plague-stricken Athenian prisoners died and rotted in their thousands. And it must be remembered that the space open to the sky was then far less than now, for the roofs of labyrinthine workings have collapsed beneath the shock of earthquakes. This far southern quarry (see the misty outlines of Ortygia) was perhaps used for the Temple of Zeus.

WHERE SYRACUSAN DEAD SLEPT IN A ROCK-HEWN STREET

Cut in the rocky slope that bounded the shoreward quarters of the old town and leads up to the wind-freshened heights once called Neapolis, or "New City," the Street of Tombs starts at an ancient fountain behind the theatre and curves round in a broad sweep. Of the hundreds of tomb chambers that line its sides, the majority are of Roman date; all have been long despoiled, and their only tenants are the brilliant lizards that love the hot stone of such a heaven-sent sun-trap.

human achievement in stone. To an austere, Boer-like Roman fighting farmer who might have visited Syracuse in the pause between the struggle with the Carthaginians of Hamilcar and of Hannibal, the city must have been astounding in its glory.

It was based on an islet some two miles long known as Ortygia. This was the original trade factory settled by Corinthians in the eighth century and designed as a fighting outpost of commerce against the Phœnicians. North of it was a small natural haven and southward a magnificent deep bay. The entrances to both of these could easily be defended, while the strait between the islet and Sicily enabled home fleets to pass from one shelter to another. Tyre had similar natural double harbours and Carthage, as we have seen (see pages 79 and 80), possessed artificially constructed ports on the same plan.

The Greeks of Syracuse were, however, more courageous than their Semitic rivals. So soon as they felt strong at sea they forwent the advantage of communicating harbours, built a great causeway from Ortygia to the Sicilian mainland and extending their city over the plateau of Achradina northward and westward used the famous fountain stream of Arethusa on the island as their water supply. At first they did not rely on fortifications but met the Carthaginians in the open field and shattered them at Himera; but in battle with new foes of their own nationality, the Athenians, they adopted the method of trench warfare and, fighting as they dug and built, drove lines through the Athenian works and raised walls, towers and ditches in the form of an immense angle running far inland to the fortress crest of Euryalos. It may be doubted if any of the renowned colossal defences of Asiatic capitals, such as Nineveh and Babylon, approached in veritable strength the sixteen miles of towered ramparts that protected Syracuse. The later defensive works of Carthage may have been modelled upon those of the Sicilian city.

When we read of the fortifications with which the skill of Archimedes endowed his native city and consider that the Romans in their long siege of it, 214-212 B.C., during which that great genius met his death, overcame the most valiant efforts of its defenders, we must either discount the estimated strength of the Archimedian works or assume that the warlike temper of the Syracusans had lessened in inverse ratio to the growth of Roman

prowess. We are told that Archimedes made the inland key fortress of Euryalos incomparably strong. A grand, irregular structure following the shape of the height it occupied, it had three immense fosses cut deep in the rocky crest which was the only line of approach. Then behind the many-towered wall of the main citadel were huge masses of masonry to serve as targets for hostile machines. The garrison was housed in subterranean halls and chambers deep in the mountain rock. Finally a vast network of tunnels, some from 6 to 10 feet wide for infantry and others higher for cavalry, connected with a great underground highway. This, in turn, led by eleven corridors, for foot and mounted troops, into the grand fosse on the western side of the crest. The great sally ports are said to have been screened by leaving thin, weed-hung partitions of live rock in front of them. As special Archimedian machines of war prevented the great canal-like ditch from being bridged, assailers had to climb in and out of the death trap and, to break down the defence, skirmishers had to descend in large numbers. Then the subterranean gates opened and poured out armoured cavalry and foot. This tunnel system was about 1,600 feet long. Another system ran some 350 feet to a northern work and below the central citadel were more great passages. A surprise and decisive counter-offensive upon an enemy's flank, when he was locked in his vain attack, seems to have been the strategic plan of Archimedes. His work was probably the masterpiece of ancient military architecture. There were other secrets in the last Syracusan system of defence, but they were soon clouded in fables of magical power by superstitious people who, not understanding his discoveries, mistook the father of modern physics for a wizard.

Stretching from the shore and protecting the fleets in each harbour were the walls and towers of Ortygia and its causeway, mounted with mighty lever-worked engines of artillery casting missiles that could sink any ship of those days. The old islet was a royal fortress, a palace-citadel, grim without and most alluring within. Here the former tyrant Agathocles had lived in fear of his people; but Hiero II., a gallant general elected to the throne, won the love of his subjects and reigned for fifty years of luxurious liberality in a palace celebrated for magnificence. He it was who skilfully balanced the great commercial centre upon

THEATRE IN DRAMA-LOVING SYRACUSE, MOST CULTURED CITY OF GREECE

Below the Street of Tombs is the theatre. It is one of the largest of its kind, being about 165 yards in diameter; forty-six tiers of seats are extant and possibly there were once as many as fifteen more. Built in the fifth century B.C. by Hiero I., it is still occasionally used for representations of Greek drama. The inscriptions to be discovered on it mainly refer to King Hiero II., the friend of Rome and munificent patron of all the arts at the end of the third century B.C.

the power of Rome, while maintaining and extending the profitable prestige of the city. With increasing trade his revenues grew and much of the money was spent in the best form of advertisement. Hiero set himself to outbuild the rest of the world. Finer in taste than the rulers of Alexandria, Antioch and other capitals of Macedonian foundation, he already possessed the grandest of sites, containing the accumulation of centuries of pure Dorian art. Being himself a Dorian aristocrat, he was one with his people in a kind of noble reticence of style. One of the last of the great classic master builders, he conserved the earliest Doric fanes, like the temple of Apollo by his palace and the temple of Athene of the sixth century still in part surviving as the cathedral of Syracuse, disguised yet remarkably complete.

On the market place he constructed a splendid new temple to the Olympian Zeus and in the Neapolis quarter he rivalled the passion for grandiose effects of Macedonian monarchs by building a colossal altar more than 600 feet long with two terraces exquisitely ornamented in the Doric manner. Near by on the southern slope of the Achradina upland was a great fifth century theatre made by Hiero I. Holding some 24,000 spectators in its sixty ranges of seats, it was one of the first in date and vastest in size of the literary stone monuments in the Hellenic world. Here the first Greek comedies, by the Sicilian originator Epicharmus, had been performed and the tragedies of the great poetic dramatists given to excited audiences. After they defeated the Athenians the Syracusans had forgiven every captive Athenian soldier who could recite fine passages from Euripides. He was still their favourite poet and his picturesque opera-like plays continued to draw crowded audiences to the grand open-air theatre. So the later Hiero crowned the work of his predecessor by remarkable embellishments in good taste.

It were idle to try to catalogue the works of this king of art, his temples and public buildings, his colonnades, gateways, ornamental open spaces and fortresses. The statuary of Syracuse, ranging from the quaint, ugly, primitive attempts on the ancient temples to the noble perfection of the Doric schools and the decadent sweetness of the Praxitelean sculptures, was in scope probably the most remarkable in existence. For it included most of the extant masterpieces of the ruined Dorian cities in Sicily.

All this immense secular wealth of architecture and sculpture glowed in the pure, bright Sicilian air with sparkling colour. Far from being a large, cold, white city, Syracuse climbed from the blue sea and the green shore up and over the plateau like a rainbow-robed capital of fairyland. There was, however, no chaos of tints. On buildings colour was used to bring out architectural lines; on statues it was employed to give to marble a peculiar breathing beauty that no work in stone now preserves.

Owing to its immense area of strongly guarded ground, Syracuse could allow her numerous merchant princes and fighting nobles lordly spaces for mansions on the great stretch of high land above the ports and the valley of the Anapos river. There was no need for small, insignificant dwelling houses in the Athenian manner. Indeed, as the southern river valley with its exotic clumps of tall, fanlike papyrus was a notorious death trap of malaria, health as well as taste and luxury led the rich Syracusans to build in a large, airy way on the uplands of their vast, ramparted city. It was one of the features of their defence, from which both Carthaginian and Athenian invaders had terribly suffered, to invite attack from the riverside by a show of weakness there, so that the besiegers should be conquered by disease. The device had, by repeated success, become notorious, yet was still held in reserve, and no important drainage works were undertaken to dry the breeding places of the deadly mosquitoes, though this preventive method against malaria is thought to have been well known in Sicily even at that time. Work ceased in the fertile malaria land well before sunset and nobody slept there in the warm season when the gnat was awake.

The great limestone quarries on the northern upland were well remembered memorials of the power of the guardian gnats of Syracuse. Beautiful they were to see, though Hiero had lately gashed their beauty in getting stone for his buildings. Along the flank of Achradina they wound for some ten furlongs, going down to a depth of thirty yards. Into them seeds of semi-tropical fruit-trees, flowers and tapestrying plants had drifted and profusely germinated under the warm sun so that they had grown like ways of Eden for scent and wild loveliness. Such were the "Latomie."

Into them had been cast in 413 B.C. some 7,000 Athenian

soldiers and sailors, the remnant of a force of some 100,000 men that had tried to carry Syracuse from the malarial southern side. Thanks mainly to the pestilent gnat, the force had been reduced to 40,000 fever-stricken men and when these endeavoured to retire they were surrounded and massacred, being too much weakened by disease to resist. The 7,000 survivors, cast into the Latomie to slave without sufficient food, mostly died in a general agony lasting seventy days. Their unburied bodies set up a plague, and the revengeful Syracusans, for their own safety, sold as slaves the small number that remained alive.

The Syracusans had been unfairly attacked by the Athenian democracy which, in sheer greed of rich dominion, aimed at subjugating the whole of Hellenic Sicily. Likewise in their conquest of Melos island the braggarts of freedom had put to death their male fellow-Hellenes, sold all the women and children as slaves and recolonised the land. Thus it came about that the men of Athens were left slowly to perish of hunger and thirst in the quarries and that the quarries now abide memorable amid the ruins of the greatest of the ancient cities of Europe as the grave of the old spirit of selfish democracy.

The Syracusans wisely preferred the rule of a dictator to that of an inflammable mob. They wavered at times under bad rulers but returned to some sort of tyrant when political disorder menaced their trade interests. At the end of the reign of Hiero II. they made a deadly mistake in judgment of foreign affairs. Hannibal was then engaged in his extraordinary career of futile victories through Italy. Syracuse reckoned its long alliance with Rome would complete the effect of its age-long antagonism to Carthage. In the hope of escaping destruction by Hannibal, it broke with Rome and sided with the conqueror of Southern Italy, who then bade fair to become the master of the world. Despite their extreme difficulties the angry Romans sent an expedition under Marcellus who strongly besieged the Sicilian capital for two years. From 214 to 212 B.C. the Syracusans with the aid of the inventive Archimedes fought the Romans. Their main fortress of Euryalos proved impregnable, but the spirit of the city garrison weakened. City Dorians of merchant breed were no longer great fighters. Neither so were their rural kinsmen the Spartans. Virtue had gone out of this great old

stock. The Romans carried the rampart and, sacking the city of its treasures, ruined its commerce and reduced it to the position of part of the province of Sicily.

To some extent commerce revived in the days of the Emperor Augustus and the vast catacombs driven through the rock of the city by the Christians, though only half explored, are in structural character more striking than those of Rome and testify, like the immense Roman amphitheatre, to the considerable population of the town. But it was shrinking. Wider and wider grew the empty spaces within the ruined ramparts. Under the conquering Moslems in 878 A.D. the process of decay quickened and it went on through the Middle Ages and the modern period, until only the earliest Dorian settlement site, Ortygia islet, remains peopled. On the mainland is the immense waste of broken, tumbled stone representing the real city as distinct from the royal island citadel. Trade flowed into Arabic and Norman-Arabic Palermo, and Palermo is still growing upon it.

Syracuse lies like the bleached, broken bones of a gigantic skeleton with one mummied foot intact. So profound is the decay that no name can be attached even to some of the grandest ruins, such as the marvellous altar to an unknown deity. Syracuse with her wealth of architecture has been wrecked beyond recognition. Her most lasting monuments are literary.

ANCIENT ARTS AND CRAFTS. XIV

ARTS AND CRAFTS OF ANCIENT BRITAIN

By Donald A. Mackenzie

ARTS AND CRAFTS OF ANCIENT BRITAIN

By Donald A. Mackenzie

Author of "Ancient Man in Britain"

IN pages 651 to 659 a comprehensive account of Stonehenge has been given as representing the great architectural achievements of the ancestors of the British peoples; and here Mr. Mackenzie sketches for us their consummate artistry in smaller things. However, as enamelling was the art in which above all else they shone, nothing less than colour-plates can do justice to their work; hence the absence of illustrations in the text. They will scarcely be missed with the fine reproductions facing pages 1116 and 1120, which are quite sufficient to show that the British Celts were by no means the savages they are often thought to have been, but rather fit to take rank among the premier craftsmen of their age.—Editor.

THERE are complimentary references in the classics not only to the fine physique but also to the intelligence and skill of the ancient Britons. Tacitus, for instance, says that the young men who studied under Roman tutors rose by reason of their native genius superior to the attainments of the Gauls; while Philostratus, in his "Imagines," makes special mention of the artistic attainments of "the islanders of the Outer Ocean" who poured coloured enamels on heated bronze. The evidence accumulated by archæologists emphasises the fact that during the pre-Roman period the arts and crafts of the early Britons had reached a high degree of excellence.

The idea that ancient Britain was wholly peopled by white savages, who lived merely by hunting and fishing, should be dismissed entirely from our minds. Even before metal working became general the agricultural mode of life had been introduced into the British Isles. With the seeds of barley, wheat and flax, and the knowledge of how to cultivate them, came the elements of a complex culture which had origin in centres of ancient civili-

sation long before Rome was built. As much is made evident by the recent finds in southern Spain and Portugal, where Louis Siret, the Belgian archæologist, has discovered traces of the existence, at the dawn of the so-called Neolithic Age, of colonies of Easterners, who were in touch with the great civilisations of Egypt and Mesopotamia (see page 970 in the article on "The First Ships"). Associated with alabaster flasks, carved ivory figurines of the mother-goddess, an Egyptian gold coronet, etc., were found objects of amber (probably Baltic amber) and of jet apparently from Whitby in Yorkshire. These colonists who appear to have exploited the mineral wealth of Western Europe were agriculturists as well as seafarers and must have explored the coasts on ancient Britain. It may be that they were the first to attach to English jet the magico-religious value which it retained well into Christian times, for we find Bede, the "father of English historians," who wrote in the eighth century, referring to jet as a substance which, "when heated, drives away serpents" and when rubbed, "holds fast whatever is applied to it, like amber." Amber-symbolism is found to be similar to jet-symbolism.

The Easterners used neolithic implements and apparently exported the ores that they searched for and found to industrial and trading centres situated in the east Mediterranean area. In Britain, as in southern Spain, the flint workers were accomplished craftsmen, possessed of keen eyes and nimble fingers. Little flint "saws," which were used also as sickles, have over twenty teeth to an inch and were not shaped by savages, but by men who had undergone a long course of training and had regularised habits of life. These highly skilled artisans likewise manufactured polished stone hammers which are found to be so symmetrical and finely balanced that, when laid on one side, they revolve on a centre of gravity. We must therefore credit them with mathematical knowledge as well as technical skill. There were "flint factories" in ancient Britain and their products were distributed over wide areas. The men who lived in Devon and Cornwall, where tinstone, the ores of copper and alluvial gold were to be found, used imported flints. Evidently the users of neolithic artifacts (articles made by man) engaged in trade and gave something in exchange for what they received.

It is now generally accepted that the craft of bronze work-

wn chiefly from specimens in the British Museum ***and*** *specially coloured for "Wonders of the Past."*

WAR TRAPPINGS OF THE ANCIENT BRITONS

To what high standards the art of the Celts of Britain rose is clearly shown in these illustrations of the products of their metal workers, and very picresque must have been the panoply of their warriors as they descended into battle. These illustrations are coloured to show the objects in their original ate. 1. Bronze helmet with red enamel studs, found in the Thames. 2. Armlet with inlaid enamel. 3. Sword hilt in bronze (the blade was of iron). 4. onze shield with bosses and decoration of enamel studs, found in the Thames near Battersea Bridge. 5. Collar. 6. Enamelled bronze harness ornament. Bronze scabbards with engraved decoration.

ing was introduced into Briton as a result of trading connexions with the Continent. The intrusions of broad-headed settlers detected in ancient graves may have been those of metal-workers. British raw materials had for long been exported but the time came when a beginning was made in utilising in Britain its great mineral wealth for home consumption as well as for foreign trade. But the Britons were no mere imitators of their Continental brethren. When, for instance, the bronze sickle came into use, it was improved by adding the socket so that it could be more firmly attached to the wooden handle. Enamelling on bronze originated on the Continent after iron was being smelted, but it was in Britain, as has been indicated, that the craft was brought to the highest pitch of perfection. In no country in the world was finer enamelling accomplished than in ancient Britain. Withal, the craftsmen were decorative artists whose products are worthy of comparison with those of even the Egyptian craftsmen of the Tutankhamen period. The enamelled bronze shield from the Thames, near Battersea, is a work of art as worthy of Homeric eulogy as was the famous shield of Achilles. If it had come from Egypt or Babylonia, it would, no doubt, have been extolled as additional proof of the refined civilisation of which it is a symbol, and of the artistic instincts of those who produced it as well as those who had created a demand for such a masterpiece in ancient times. It is certainly a notable work with a long history behind it.

The Battersea shield should be regarded, in the first place, as a symbol of pre-Roman British culture. Although it betrays a cultivated æsthetic sense and is "a thing of beauty" and "a joy for ever," its scheme of decoration had more than an æsthetic value to the ancient people. The swastika, the ring, the U-form and S-form motifs were symbols which meant as much to the British pagans as did the Cross and other Christian symbols to their descendants in post-Roman times. Even the enamel itself possessed a religious value. Red enamel was used with, and as a substitute for, red coral, and coral was supposed to be the sea-tree of the mother-goddess who had had her origin in water like the sea-born Aphrodite (Venus). The belief that coral was a marine tree was entertained in ancient Europe and Asia; it was supposed to be white when it began to grow and to become yellow

with time and ultimately red. It was first fished for in the Red Sea, which was famous also for its pearls, and later in the Mediterranean. Pliny regarded coral as a sacred substance and as a preservative against danger. One of its traditional names, which connects it with the mother goddess, is "Isis Nobilis." In Old Persian and Arabic coral is "margan" which means "life giver"; the pearl is also called "margan." A "life giver" was a "luck bringer."

We moderns who favour mascots and regard certain precious stones as "lucky" or "unlucky" should have no hesitation in recognising that there must have been a deep-rooted psychological motif for the manufacture of ancient British enamel. It may have been a substitute for coral, but substitutes were not regarded as shams. The ancient people regarded substitutes with as much reverence as they did the originals. They were fusions of luck-bringing materials and particularly potent on that account. It is evident that enamel which was used to adorn charms, armlets, bracelets, the bits of horses, chariots, etc., was supposed to protect warriors like the pearls which Cuchullin, the Celtic hero, wore in his hair and the beads of coloured glass which in Welsh and Gaelic were connected with the Druids and with serpents. The symbol of the boar, which was in ancient Britain associated with coral and enamel, was supposed, as Tacitus informs us, to protect warriors in battle.

The manufacture of enamel was in ancient times a difficult and costly process. British artisans had to have furnaces capable of generating an intense heat, the melting point being somewhere near 700 Centigrade. The colours were obtained by adding to the opaque glassy mixture various metallic oxides. Red enamel was obtained by the use of red oxide of copper. The ancient British chemists and metallurgists also produced white, yellow and blue enamels. It may be that blue enamel was a substitute for turquoise or lapis lazuli, both of which had a religious value over wide areas in ancient times. The green beads worn as charms in ancient Britain, as elsewhere, similarly required great technical skill for their manufacture. Their colour also came from copper which, having been brought to a great heat, was poured on sandstone. Imported blue beads were also worn. In the Devizes museum is an interesting old necklace

which was found in a grave in the Salisbury Plain district. The beads are of jet, shale, amber and blue faience (vitreous paste).

Professor Sayce and Dr. Hall have identified the blue beads as of ancient Egyptian manufacture and of a particular type belonging to the eighteenth and nineteenth dynasties. Evidently their magico-religious value was appreciated in ancient Britain as far back as about 1400 B.C.—that is, a generation or so before Tutankhamen began to reign; evidently, too, the luck beads which were substitutes like the later enamels were thought to be of as great potency as amber and jet. The beliefs connected with the Egyptian beads must have been imported; if they had not been, the charms would not have been appreciated or associated with other "luck bringers." Blue beads are still worn in Greece as charms against the "evil eye."

After the Romans overran England and part of Scotland, the design favoured by British enamellers were influenced somewhat by Roman symbolism, but the native craftsman had nothing to learn from the conqueror in connexion with the technical process. The Romans, as has been indicated, admired the work of the Britons. It has been suggested in this connexion by Sir Hercules Read, of the British Museum, that an enamelled object found in the Fayum, Egypt, was carried thither by a Roman soldier who had served in Britain. It is no exaggeration to say that prior to the Roman period the ancient British arts and crafts were much more highly developed than was the case during the long unsettled period that followed the withdrawal of the Roman legions. Everything the skilled workers touched they beautified.

Although England was before the Roman conquest divided into a number of petty states, as were also Ireland and Scotland, it must have enjoyed a long period of peace and prosperity which favoured the development of the arts and crafts. Our ancient civilisation was based upon the agricultural mode of life; when the explorer Pytheas reached our shores about 330 B.C., he saw fields of corn and vegetables and commented on the fact that threshing operations were conducted in "great houses" (barns) instead of on the open threshing floors favoured in the south of France. He is believed to be the authority referred to by those Greek writers who state that the Britons made from barley that

beer which Dioscorides, the physician, condemned as "a drink which caused headaches and injury to the nerves."

Pytheas, no doubt, described the garments worn by the Britons, but no extracts regarding them survive in the quotations made by later writers from his lost work. According to the late Sir John Rhys, however, "the word Brython and its congeners meant a clothed, or cloth-clad people," being connected with the Welsh "brith" (spotted, parti-coloured) and "brethyn" (cloth), as well as with the Irish-Gaelic word "brat" (a cloth, a cloak or a sail). Martial (A.D 40-104) refers to a life "as loose as the old breeches of a British pauper" (Epigram x. 22). The Continental Celts, according to Poseidonius of Apamea (first century A.D.,), wore breeches and tartan cloaks.

Tacitus says in his "Life of Agricola" that the manners and customs of the Irish differed little from those of the Britons, a fact which finds confirmation in the research work of modern Celtic scholars who have traced the migrations of certain British tribes from ancient England to Ireland. The Irish-Gaelic " sagas " which refer to events in the first century of our era, and even earlier, contain interesting data regarding clothing. Undergarments were of linen (Gaelic "léne" derived from "lin," flax, Welsh " llin " and Cornish " lin," and of common origin with the Latin and Greek names for linen and flax). The Celts cultivated flax in this country as on the Continent; so did the earlier Iberians. Wool was spun and woven. It may be that the black cloaks referred to in Irish tales were of goats' hair like those worn, according to classical evidence, by the Continental Celt-Iberians. The distaff was used for spinning, and ancient spindle-whorls of clay and stone are preserved in museums, as well as the hand combs used by the weavers. Spindles made of wood, and so shaped as not to require whorls of clay or stone, continued in use until comparatively recently in the Highlands. The earliest needles were of bone; needles of bronze ultimately came into favour. An embroidery needle was costly, its value being in Ireland an ounce of silver. Skins were worn, no doubt chiefly in the winter season. Among the military aristocrats there evidently existed a demand for comfortable furs. A cape of otter skins found at a depth of six feet in Derrykeighan, Antrim, in 1861, displays remarkable skill. " The sewing," wrote an antiquary

rawn chiefly from specimens in the British Museum and specially coloured for "Wonders of the Past."

CELTIC CRAFTSMANSHIP IN DESIGN AND INLAY

The objects illustrated here are of less martial nature and of more intricate design, showing how adept the ancient Celts were in the applied arts; their ork is stamped with a virility and a character far superior to that of the meaningless trinkets of the evanescent craft of to-day. 1. Engraved and enelled mirror back, found in Gloucestershire. 2. Silver and gold brooch set with amber. 3. Manuscript design in blue, green, yellow and red enamel. Bronze bridle bit with decorative enamel inlay in red and blue. 5. Harness ornament. 6. Enamelled ornament. 7. Silver gilt brooch. 8. Bead cklace found in Scotland. 9. Bronze and enamel ornament. 10. Necklace of jet. 11. Harness ornament in bronze and enamel.

soon after the find was made, " is wonderfully beautiful and regular, and several parts are joined so as not to disturb the fur, so that from the outside it looks as if formed of one piece."

Dyes were procured chiefly from plants. Purple, the royal colour, appears to have been obtained originally from purple-yielding shells. The Gaelic word " corcur" (purple-red), and the Welsh "porphor" were of common origin with the Latin " purpura." Shell-purple was used in the ancient Irish manuscripts and Bede refers to the purple-yielding shells found on the coasts of Britain. In the Irish-Gaelic Cuchullin epic there are references to " green mantles," " many-coloured cloaks," " dark blue cloaks," "gleaming white tunics," "purple cloaks," "long tunics with hoods," "tunics of thread of gold next to the skin" and other garments obviously not of Roman origin. No doubt similar garments were originally used by those sons of the leading chiefs of England who, according to Tacitus, came to regard Roman apparel without prejudice and promoted the fashion of wearing the Roman toga.

The British military aristocrats, who had been involved in struggles for political supremacy, do not appear to have interfered with the working classes. An interesting reference in this connexion occurs in a Gaelic account of an invasion; as the army crosses a ford, they see a man washing for gold; he is left undisturbed. The indignation displayed by the Britons who attacked Cæsar's soldiers when they began to rob the native farmers by reaping their crops is of significance in this connexion. Cæsar regarded the attack as a breach of the truce; the Britons apparently regarded the robbery as a breach of the unwritten laws that should be observed by all warriors.

The reference to gold washing is of special interest because an arbitrary value was attached to gold in Great Britain and Ireland as on the Continent and in the great centres of ancient civilisation. It was customary for the Continental Celts to deposit gold in their temples and in sacred lakes, apparently believing, like the Buddhists, that by so doing they accumulated religious merit. Poseidonius of Apamea tells that the Romans put up these sacred lakes to public sale and that many purchasers found quantities of precious metals in them. An Irish god, remembered as " Crom Cruach," had an idol of gold. As the "idol " appears

to have been a standing stone it must have been wholly or partly overlaid with gold. A gold rod was found in association with a stone circle near Inverness and it may have been a cult object. Personal ornaments of gold discovered in Great Britain and Ireland are finely wrought and are of symbolic shape or adorned with symbols. Portions of a gold torque which was worn round the neck, from Clevedon, Somerset, are finely ornamented with symbols, including the "trisula."

These symbols were in ancient Gaelic called "delba" and in an old glossary it is stated that the pagans were wont to carve on religious objects "the delba of the elements they worshipped, as for example the figure of the sun." The golden collars worn by kings were supposed to shrink and choke them if they gave unjust judgments. There were various types of necklets, the most gorgeous being broad crescents called in Gaelic "muince" from "muin," the neck. Other gold ornaments included earrings, small hollow gold balls which were suspended from the hair, rings, beads and bracelets. A quaint object was the so-called fibula, called in Gaelic "bunne-do-at" (pronounced "boon'yee doo at"), which means "ring with two knobs." It was worn on the breast either singly or in pairs and had apparently a magico-religious value. The gold ornaments of the ancient Britons, like the jet, were often decorated with symbols similar to those seen on the chalk drum found at Folkton (see illustration facing page 908), which was quite evidently a religious object. In the gold ornament room of the British Museum are fine examples of the work of the ancient British goldsmiths. Of special interest is a bracelet with six pieces of ring money. These rings continued in use until Anglo Saxon times, for in the Beowulf epic the warrior chief is lauded as a "giver-out of rings." Gold was found in Scotland and Wales as well as in Ireland.

Bars of iron were, according to Cæsar, likewise used as a medium for exchange and there are specimens of ancient British iron currency bars in the British Museum. Coins of gold and silver came into use in Britain about 100 B.C. or earlier, but their circulation was confined to the east and south of England. Professor Ridgeway's view is that they were used chiefly on the tin trade route, but tin was not the only export from Britain. In Ireland a standard of value was the pearl which was equal to an

ounce of gold or to a cow. That the non-existence of native coins is no indication as to the amount of trade done even with foreigners is made evident by the statement of Tacitus who said that the harbours and approaches of Ireland were well known because merchants resorted thither for the sake of commerce. Cæsar refers to the Gaulish traders who visited England and blames them for having conveyed to the Britons information of his intention to cross the Channel.

Shipbuilding must be included among the crafts practised by the ancient Britons. When the Veneti of Brittany rose against the Romans, they mobilised a fleet of 220 ships. This naval force was contributed to by their allies along the Channel coast of modern France and the coasts of modern Belgium and Holland. Cæsar states that assistance was also received from Britain. He tells that the Celtic vessels were built of oak and had very high forecastles, the sails being of untanned hide. These ships were much larger and more substantial than those used by the Romans and must be distinguished from the "curraghs," or spin boats with frames of wicker work used by fishermen and small traders, some of which were little, while others were big and strong and furnished with masts and decks. The Veneti vessel was the prototype of the later Viking ship (see pages 683 to 688).

The Picts of Scotland had like their kinsmen, the Pictones of Gaul, vessels which Vegetius refers to as skiffs. These were the " destroyers " of their day, and had twenty oars a side. Sails, hulls and the attire of the seamen were of one colour, a neutral tint. The Picts raided the coast of Roman Britain; their chief naval base was in Orkney. Scapa Flow was even then of strategic importance.

The military aristocrats who dominated ancient Britain had standing armies. Cæsar comments on the steadiness of their infantry and the mobility of their cavalry. But what astonished him most was the skill displayed by the charioteers, whose efficiency was, he informs us, due to constant practice and manœuvring. Evidently the Britons, like the Achæans of Homer, were " tamers of horses." Large numbers of skilled artisans must have been employed in the manufacture of chariots. According to the evidence obtained from the Irish manuscripts an ordinary chariot was worth about twelve cows. The late Dr.

P. W. Joyce estimated that twelve cows represent about £150 or £160 of our money. Royal chariots, however, were worth from eighty to ninety cows and were, no doubt, richly adorned. Propertius, the elegiac poet who was born about 51 B.C., makes reference to the ornamented yokes of British chariots. The ancient enamelled horse trappings preserved in the British Museum must have been very costly. Skilled workers had to be trained and paid, if not in money at least in kind, while some of the colouring substances had to be imported. Cæsar says that the Britons imported bronze. But bronze implements and weapons were also cast in this country, for the moulds have been found, while definite evidence has been forthcoming that the enamels were manufactured in ancient England or Ireland and were not imported. Whether or not the Scottish enamels were of local manufacture has yet to be proved. Moulds for bronze casting have, however, been found in Scotland as far north as the county of Sutherland.

The Celtic designs which were used to ornament the bronze and other implements and weapons of pre-Roman England continued in use and were greatly developed in Scotland well into the Christian era. On the north-east coast a large number of sculptured stones which survive are beautifully carved with Celtic designs, the symbols being partly pagan and partly Christian. Some of the stones with animal figures appear to be wholly pagan, and had undoubtedly a religious significance.

The racial name of the ancient Britons was rendered by the Greeks as "Prettanoi" and has survived in Welsh as "Prydein" and in Gaelic (the language of the Q-Celts) as "Cruithne." There were Cruithne in ancient Scotland and in all the provinces of ancient Ireland. Pliny referred to the island group formed by England, Wales, Scotland and Ireland as "Britanniæ." Ireland was a Britannic isle as well as England and Scotland. The culture of the ancient Britons was apparently disseminated by the traders and military aristocrats. The Damnonians (Dumnonii), the miners and seafarers who occupied Devon and Cornwall, were represented in south-western and central Scotland and in Ireland; they were related to the Setanii of Lancashire, a notable representative of which tribe in Ireland was the famous Cuchullin, and to the Brigantes of central

England and south-eastern Scotland (also conquerors in Ireland) whose goddess was Bridget or Bride. The Caledonians of Scotland, the Iceni of Essex and certain other English Celtic tribes were mainly tall and fair, like the Continental Celts. With the imported Celtic culture, which had Ægean elements, was fused in ancient Britain the culture of the earlier settlers from the Iberian peninsula (Spain and Portugal) who exploited the mineral wealth of the islands and reached as far north as Orkney.

Both the Celts and Iberians appear to have erected megalithic monuments some of which are still referred to in Gaelic as "stones of worship." These required for their erection not only engineering skill but organised and controlled labour. The bond which united the workers was in all probability a religious one. In ancient times religion was the main source of inspiration for the arts and its impress can also be traced in the crafts. It may be that it was owing to religious influence that wheel-made pottery was not favoured in ancient Briton except in a limited area and shortly before the Roman period. In ancient times handmade pottery had a religious value, as it still has in some parts of Asia. Most of the ancient British pottery in our museums is funerary pottery.

The mass of evidence, therefore, that archæologists have been patiently collecting should be sufficient to disabuse our minds of an idea taught too often by history books in the past; these have for long presented a picture of the peoples who gave their name to the British Isles as an unorganised crowd of naked, blue-painted barbarians. Rather were they well worthy to take their place among those civilised communities of Europe from which Greeks and Romans only stood out by virtue of some individual excellence but not because of any essential difference.

No classical heroine makes a stronger appeal to our imaginations than the noble and patriotic Boadicea (Boudicca) of Essex, while Galgacus, the Caledonian general, and Caratacus (Caradoc) the Briton are worthy to be classed among the Homeric heroes. The ancient literature of the English Celts has perished, but the Gaelic "sagas" preserved in Ireland reveal a code of chivalry unknown to the Romans and an advanced state of civilisation similar to that which prevailed in ancient England and Scotland.

TEMPLES OF THE GODS. XXII

DELPHI OF THE ORACLE

By Edward Wright

DELPHI OF THE ORACLE

By Edward Wright

ON the south-western flank of the huge mass of Parnassus that dominates a mountainous, earthquaking region north of the Gulf of Corinth there was a small rift in the rock from which intoxicating fumes rose. Long before any Greek entered the country the native goatherds had made the spot famous and prophetic rites were carried on under the protection of a snake deity. Out of this extraordinary natural gas well the invading Greeks gradually constructed an oracle, known in the age of Homer by its old snake name of Pytho and changed to Delphi by Dorian conquerors. They set up as presiding deity their favourite god Apollo fabling that he had killed the snake, formed themselves into a sacred caste from which alone high priests could be chosen, and arranged a league with neighbouring clans for the protection of the wonderful shrine.

Masters of craft were these Dorians; old Egyptian mystery-mongers had nothing to teach them. They did not breathe the deadly volcanic gas of Parnassus themselves, but appointed native mountaineering maids as assistant priestesses. In a hut of laurel boughs the unhappy girls sat on a tripod over the chasm and breathed the fumes until they became half demented. Sometimes they died, but usually they were removed in a raving condition; and their ravings were the oracle of the god. There was no sense in what they said, but the priests interpreted each message—that is, they devised as vague answers as possible to the questions of pilgrims; their real practical work was that of politicians working in the Dorian interests. When their southern kinsfolk, the Spartans, began to rise to power, the influence of Delphi increased. In a higher, disinterested way the priests used

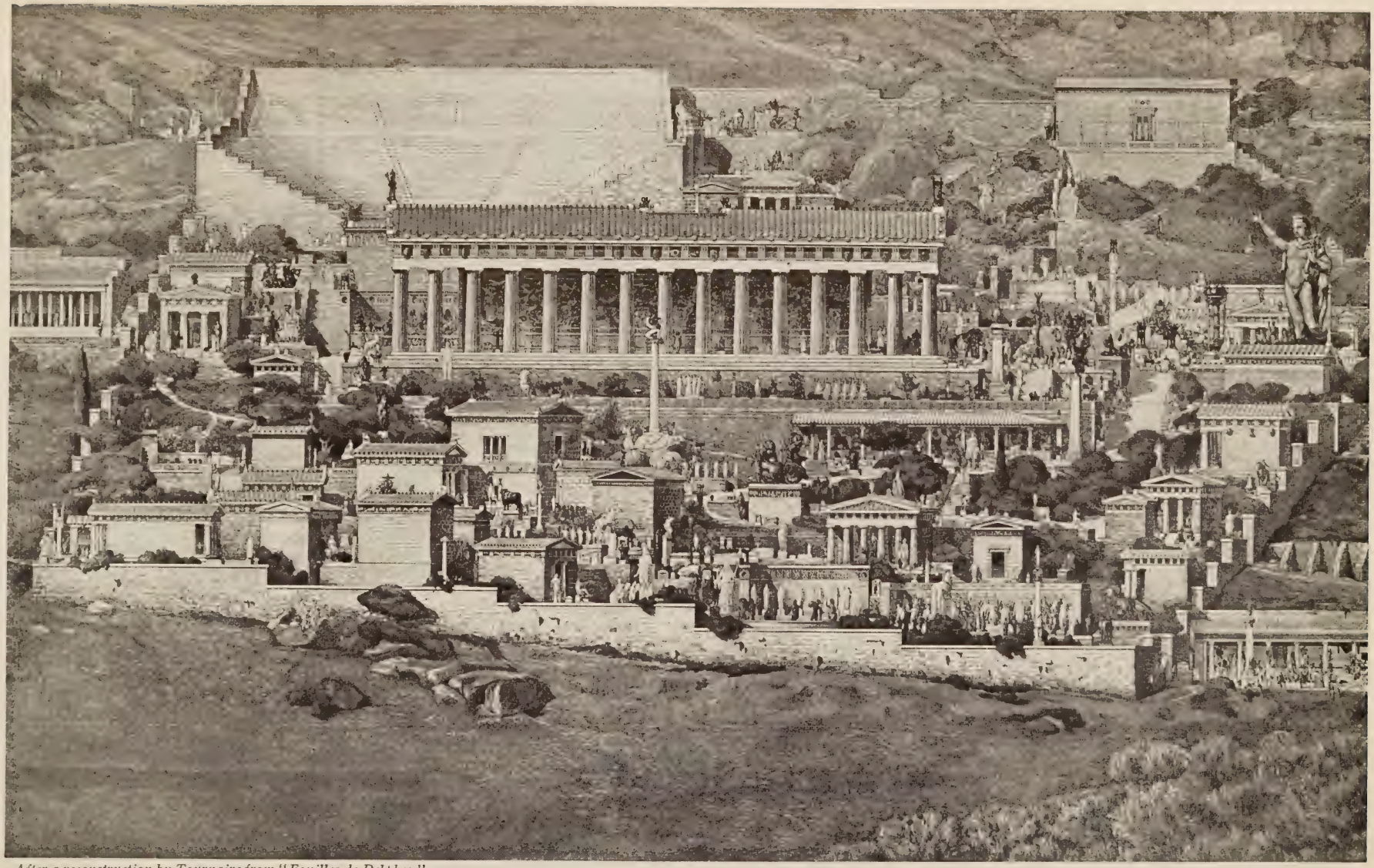
religion in an effort to weld the Greeks together into some kind of federated nation. By the seventh century B.C. Delphi was so strong that Solon of Athens, the incarnation of political wisdom, attached his state to the league that centred in the shrine. Foreign potentates, such as the line of Lydian kings ending in Crœsus and Amasis (Aahmes II.) of Egypt, sought for Delphian oracles. In the sixth century an exiled group of Athenian nobles built the first historic temple of Delphi, and with the development of the sacred games and the increase in great pilgrim embassies the religious centre became a glorious holy city.

The situation was incomparable in its union of natural grandeur and artistic loveliness. Above, at a height of 8,070 feet, were the five peaks of massive Parnassus where wolf and wild boar roamed the snowfields. About midway down, the mountain slope ceased and an immense wall of cliff a thousand feet high stood above the Delphic hollow, ramparting it from the northern to the eastern sides. A cascading winter torrent had split the cliff into two parts and at the mouth of the chasm a spring welled into a great square basin of rock. This was the holy Castalian spring with whose lustral water ministrants washed their hair and pilgrims sprinkled themselves. From the base of the two cliffs and the sacramental fountain a steep slope went down in a series of terraces to the glen of the river Pleistos, on the farther side of which the land again rose sharply to Mount Kirphis.

The general appearance of Delphi was that of a vast rocky amphitheatre ringed with mountains with the city and the oracle set at the top. In the high north-western corner was the stadium for the sacred games; below this was the limestone theatre and then the great walled close of Apollo, with a sacred way twisting upward from the southern gate by the exquisite treasure houses of the principal Greek city states to the most famous of temples. The fane, measuring 197 feet by 72 feet, rested on a large terrace supported by walls of the most perfect masonry. As rebuilt in the fourth century B.C. after an earthquake, and as practically extant in the fourth century A.D., it consisted of an outer Doric colonnade and an inner row of Ionic columns enclosing the great central shrine. Here was preserved beside a perpetual fire a large, conical, carved piece of marble connected with the ancient snake worship but supposed to mark the centre of the earth and

ALL OF APOLLO'S DELPHIC FANE THAT SURVIVES THE BLOWS OF MAN AND TIME

Heart of the Delphic precinct and scene of the prophetic ravings of the Pythian priestess, the great temple of Apollo is now represented by no more than its foundations, while the Adyton or inmost shrine of the oracle with its vaporous chasm has been so thoroughly destroyed that deep excavation fails to reveal its exact arrangements. At the height of Delphi's prestige the temple was a hexastyle structure, with its outer colonnade in the Doric style and its inner pillars Ionic, built or completed by an exiled Athenian family, the Alkmaioinids, in about 415 B.C. What remains to us now, however, appears to be the result of a later restoration that followed the old plan, in spite of the contrary belief of Pausanias.



After a reconstruction by Tournaire from "Fouilles de Delphes."

GLORIES OF ART THAT ONCE ENRICHED THE SAGEST ORACLE OF ANCIENT TIMES

Clasped like a jewel of many facets in a setting of dark metal, this scene of brilliance gleamed amid the sombre beauties of Delphi. In the centre of the precinct is the temple of Apollo with the theatre above it on the left and the treasuries of the Greek states grouped below; the one immediately beneath its left-hand column is the treasury of the Athenians. Of the countless works of art that gave the site a whole population in bronze and marble some have been described already in this work; the Sphinx of the Naxians may here be seen on its column below the temple; the "Auriga" to the left of the steps below

therefore called the navel-stone or "Omphalos." By it were a golden Apollo and golden images of the two eagles of Zeus. Below was a dim subterranean chamber enclosing the volcanic rift from which the maddening gas rose.

Upon a column formed of three twining snakes, later removed by Constantine to Constantinople where it is still to be seen in the Atmeidan, there stood a golden trivet. On the trivet was a golden cauldron and in this sat the pale, wild Pythian priestess inhaling the fumes and writhing, while the masters of the oracle took down her broken expressions and interpreted their meaning in remarkably bad verse. In the later period, after one of the virgins had been dishonoured, a single aging woman was employed to inhale the gas and rave. Details of this kind did not matter. The important thing was the practical wisdom shown by the subtle interpreters. For some centuries, between the Dorian settlement and the Persian invasion, they avoided blunders and achieved many successes. They reconciled warring states and directed the colonising ventures of the cities in such a way as to prevent rivalries and wasting conflicts. Streams of pilgrims brought them news of political events in Hellas, of the course of trade and of the last discoveries in the lands of barbarians.

Their special information regarding the gigantic forces of the Persian invader, Xerxes, proved their undoing. Knowing with fair exactness the strength of the Persians, they reckoned that resistance was hopeless. Using the complete machinery of the oracle they counselled absolute submission or flight. After the marvellous Athenian and Spartan victories the priests of Delphi were regarded as traitors in Persian pay. The Athenians especially lost their awe of the cowardly oracle and developed that sceptic, searching spirit of intellect from which the modern movement of knowledge was born. Gradually Delphi declined into the resort of the superstitious and if enlightened statesmen condescended to approach the oracle it was for the purpose of obtaining a prearranged message that might induce the unthinking class of freemen to follow the course of policy marked out for them.

The great Delphi or Pythian festival remained, however, a national attraction. By one tremendous mistake the priests had lost for ever the opportunity of federating the clans and direct-

ing them in peaceful expansion and warlike adventure; they were no longer able to prevent the Hellas-shattering struggle between the Spartan military class whom they favoured and the Athenian imperialist democrats whom they feared. Yet they still could charm the poetry-loving Athenians by their ancient contest in verse and music and attract the sport-loving Spartans by their athletic games. The original festival at Delphi was devoted to the singing of a hymn to Apollo to the accompaniment of a lyre. At first the singing poets competed every eighth year, but from 586 B.C. the contest was held every fourth year in August. The prize was a laurel wreath. In the earliest time, Homer and Hesiod are said to have been disqualified because they could not play the lyre; in the latest age Nero was among the winners, but offended by an oraculous answer that seemed to reflect upon his treatment of his mother he tried to destroy the temple and removed 500 pieces of sculpture.

However this may be, Delphi was almost until her end a wonderful scene of the glories of Greek art. Her wealth invited the plunderer. In the fourth century B.C. the neighbouring Phocians stole her works of gold; in the following century the Gauls under Brennus tried to sack sanctuary and city but were repulsed by a gathering of the Greek armies. What Delphi lost in works of precious metal yet left her supreme in historic splendour. For it was the custom of Greek states, when victorious over other Hellenic cities or over aliens, to hang a tithe of their spoil about the temple, or devote it to an artistic commemoration of their triumph in the national shrine. Victories and defeats of Athenians, successes and disasters of Spartans and the great adventures of other states down to little nests of Greek island pirates were kept in memory by a countless variety of glorious works in metal and marble. Then, outside the close of Apollo, was the increasing multitude of the statues of victors in the games. Victorious poets were likewise honoured.

Eastward across the ravine from Castely rose the city, some sixteen furlongs in circumference, with its temples to Athene and other deities, a noble gymnasium and small dwelling houses. All the unrivalled scene lasted to the end of the Roman Empire, gathering new works of architecture under Emperors sometimes moved by superstitious reverence for the oracle and sometimes by

Photo by Autotype Co.

AMID WILD BEAUTY AND THE PORTENTS OF NATURE: DELPHI'S INCOMPARABLE SETTING

Faced with the gloom and grandeur of the Delphic gorge one has no difficulty in understanding the religious awe of the pre-Hellenic worshippers by the volcanic rift or of the first Greeks who founded there the temple of their own prophetic god, Apollo. Two limbs of the great bulk of Parnassus, the Phaidriadai or Shining Cliffs, approach each other and frame a narrow torrent, wooded at its upper end, that foams down in icy cascades in time of spate. At the mouth of the chasm is another spring, the Castalian, that keeps a trickle flowing in the torrent bed during the severest drought; and on the slope where the village stands once rose the precinct and city of Delphi. The entire village has since been removed by the excavators.

FROM DELPHI, HOME OF ART

In the museum at Delphi is to be seen this exquisite caryatid and acanthus leaf pedestal, fruit of the excavators' toil. Formed of dancing girls from Karyai, it was designed to support a tripod or votive offering.

ATHENE'S EMBASSY IN APOLLO'S CAPITAL

Most of the important Greek states had "treasuries" at Delphi—receptacles for votive offerings, consulates, as it were, in the city of the god. The treasury of the Athenians, an exquisite little Doric temple in shape erected with the spoils taken at Marathon, has been rebuilt by the excavators with loving care since at least four-fifths of its original materials were recoverable.

AS AN EAGLE MIGHT SEE DELPHI FROM THE CRAGS OF PARNASSUS

Here is Delphi as it appears to-day from the cliffs above after the removal of the village of Castri to another site. In the centre may be seen the rectangular foundations of the fane of Apollo with the Greek theatre above it. In the upper right-hand corner may be seen the stadium where the Pythian games were held; while surrounding the temple and stretching down towards the road the enclosure walls may be traced.

artistic admiration. But Constantine removed the best treasures to his new capital and finally Theodosius abolished the oracle; earthquakes destroyed the buildings and closed the vent by which the oracle-working gas issued. In 1891 French excavators removed the modern village of Castri and dug up what earthquakes and spoilers had spared.

THE GREAT MONUMENTS. XI

THE ROSETTA STONE: MASTER KEY TO EGYPT'S LORE

By H. R. Hall, D.Litt., F.S.A.

THE ROSETTA STONE: MASTERY KEY TO EGYPT'S LORE

By H. R. Hall, D.Litt., F.S.A.

Deputy Keeper of Egyptian and Assyrian Antiquities, British Museum

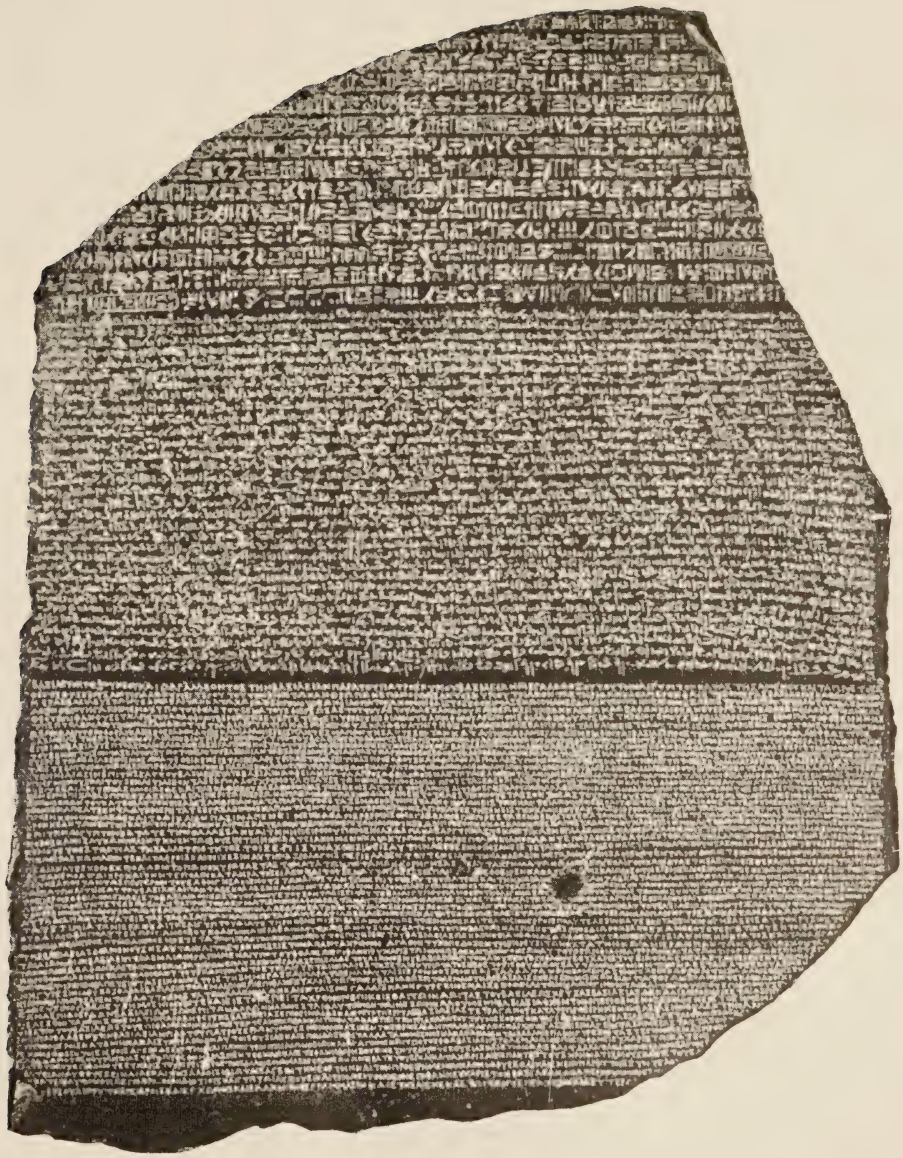
THE Rosetta Stone is not a Wonder of the Past. It is a shapeless, broken slab of black basalt inscribed, no better and no worse than hundreds of other records in Egypt and other lands, with close-set lines of three different characters. But it is the key—the master key—that has unlocked for us a treasure house rich with marvel, with stores of learning and with human interest. Without it the history of the world's earliest civilisation—of Egypt—might still be closed to us; without it the wonder of Karnak and Luxor would be vague and meaningless, the moving, human story of Akhnaton for ever lost beneath the centuries and the tomb of Tutankhamen with all its regal pomp still buried in the Valley of the Kings; for it revealed to us the meaning of the sacred characters in which the Egyptians had been writing and carving their records for nearly four thousand years. This incalculable value adhering to a thing of little intrinsic wonder surely justifies its inclusion as a "Great Monument" in Wonders of the Past; *and here Dr. Hall tells the story of its momentous discovery and interpretation, than which no tale of detectives, clues and cryptograms could be more thrilling.*—Editor.

TO most people the British Museum means, apart from the Library, two things, both ancient Egyptian: mummies and the Rosetta Stone. The block of dark stone on its pedestal at the entrance to the great Egyptian Sculpture Gallery is indeed a monument of transcendent importance, for the inscriptions on its face gave the two first decipherers of the ancient Egyptian writing, Young and Champollion, their first clues. Young did not carry out his researches so far as he might and so lost the glory of being the father of egyptology, but there is no doubt that Champollion owed much to him, probably his inspiration in the first place and then several ideas. Champollion, however, was the first to write an Egyptian grammar, though Young

must share with him the glory of having laid the foundation stone of our modern knowledge.

The Rosetta Stone is a block of black basalt, about 3 feet 9 inches by 2 feet 4 inches in dimensions, on which is an inscription cut in two languages, Greek and Egyptian, and in three scripts, Greek and the Egyptian hieroglyphic and demotic. The last is a sort of shorthand, first developed about 900 B.C. from the older hieratic, or cursive form of the hieroglyphs, which had gone out of use by the time the Rosetta Stone was made and is not represented on it. The inscription is identical in both languages and is a copy of a decree set forth by the Egyptian priests to commemorate the coronation of King Ptolemy V Epiphanes, in his ninth year, B.C. 196. It enumerates the good deeds he had done during his reign.

Originally it was set up at Memphis but at an unknown period had been transported to the town of Rosetta on the seacoast, where it was found by the French troops of Napoleon Buonaparte in 1799. In 1801 it was ceded to the British conqueror of Egypt, together with other antiquities collected by the French savants who accompanied Buonaparte, and brought to England where it was placed in the British Museum as a gift from King George III. From the first it attracted the attention of scholars on account of its bilingual character which gave a hope of possible decipherment to be brilliantly fulfilled. Two foreign scholars, Silvestre de Sacy and Akerblad, succeeded in identifying the royal names in the demotic text on account of their correspondence in position to the Greek names. The groups in the hieroglyphic text enclosed within an oval line or "cartouche" were rightly assumed by Zoega on account of this distinction to be royal names. But it was Young who first proved this assumption to be correct and successfully deciphered the name of Ptolemy on the Rosetta Stone, and that of Berenike on another royal decree of the same kind, since he was the first to assume that the signs within the cartouches were alphabetic or quasi-alphabetic and not purely symbolic as had formerly been supposed. On this foundation Champollion in 1822 based his wonderful decipherment of the actual words of the inscription in the hieroglyphs outside the cartouches—which he soon found, by applying Young's and his own results

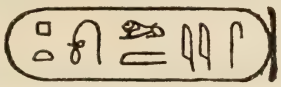
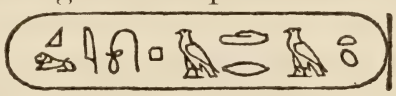


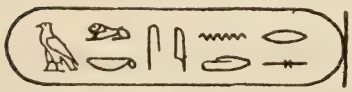
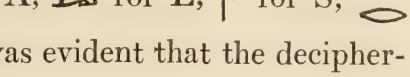
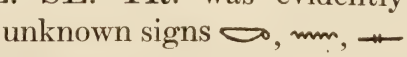
By permission of the Trustees of the British Museum.

CLUE TO AN AGE OLD LORE

One of the greatest triumphs of archæology lay in the discovery in 1799 of the Rosetta Stone from which the meaningless script of ancient Egypt was explained. Its inscriptions are in hieroglyphic (here reading from right to left), demotic and Greek.

to them, to be in the form of the Coptic language, the tongue in whose modified Greek characters the Egyptian native Christian scriptures had always been written. It was then seen that Coptic was simply a late form of ancient Egyptian.

The royal names were deciphered as follows. It was found that a name within a cartouche corresponding in position to the Greek *ΠΤΟΛΕΜΑΙΟΣ* = Ptolemaios (Ptolemy) consisted of the signs  which were read P-T-O-L-M-I-S, Ptol(e)m(a)i(o)s; the E and A (and in other instances the O) being left out according to the principle, well known to Semitic scholars, of omitting vowels. Then the name *ΚΛΕΟΠΑΤΡΑ* (Cleopatra) on a bilingual inscription at Philæ was found to be the equivalent of  and in this name it was evident that, arguing from the supposed equivalent of Ptolemy, the letters L, O and P occurred in approximately their proper positions. The sign following (P) and the second were assumed to be A from the position of the same sign in the name Berenike or Berenika, so that must equal TR and equal K, in which case would have to equal E. In this case the vowels were obviously given, although in the name of Ptolemy they were not, with the exception of O and unless we regard (I or Y) as a vowel. Young had noted that the signs normally followed a female name so that they could be omitted as simply a feminine termination, which they proved to be.

Now the results from the two names were applied to the word  which should be the Egyptian equivalent of Alexander. was correct for A, for L, for S,  for TR, while should be E. It was evident that the decipherment was on right lines, for AL. SE. TR. was evidently *ΑΛΕΞΑΝΔΡΟΣ* (Alexander) and the unknown signs  must be a second form of K, the sign for N and a second form of S; the whole reading ALKSENTRS. Evidently, as sometimes in the name of Ptolemaios, the O was omitted and

the E obviously was also, while the Greek Ξ (X) was quite correctly represented by KS and 𓎛 could evidently be either an A or E and 𓏏 a T or a D. The Egyptians spelt the name as best they could in their hieroglyphic script, in which it could have been read Aleksentres or Alkesnotris or any other combination of vowels with the consonantal skeleton of the word; but there is no doubt, of course, that they read it Alexandros which it could equally well represent.

The further steps by which the actual words of the language were read in Coptic and the meanings of the ideographic signs, expressing ideas of which the names were not spelt out, were gradually ascertained would take too long to recount. But the foundation once laid, as shown above, progress was rapid and the writing was soon seen to be in its method much like the Japanese, which combines Chinese ideographs with words spelt out in the native Japanese syllabary. A Japanese would grasp the principle of the Egyptian hieroglyphic script at once, and those who are acquainted with Japanese will understand what is meant when it is said that Egyptian hieroglyphs are a combination of ideographic signs with alphabetic or more properly alphabeto-syllabic letters. But whereas the Egyptian signs are all pictures of actual objects, the Japanese are derived from ancient Chinese picture-signs analogous to the Egyptian, which long ago lost their hieroglyphic character and have become mere collections of strokes which only occasionally give us an idea of the original picture from which they are derived. The Chinese ideographs somewhat resemble Egyptian hieratic signs in their style and stage of development, while the Japanese syllabic signs, derived again from the ideographs, correspond in development to the Egyptian demotic.

It was thus from the study of the Rosetta Stone, combined with other monuments, that we derived the knowledge which now enables us to read all Egyptian inscriptions and which has told us the real history of ancient Egypt.

TEMPLES OF THE GODS. XXIII

GREAT HINDU TEMPLES OF INDIA

By F. Deaville Walker

GREAT HINDU TEMPLES OF INDIA

By F. Deaville Walker

Author of "India and Her Peoples"

In earlier chapters in Wonders of the Past *the author has dealt with the ancient Buddhist and Jain remains and also with the wonderful cave temples of Ellora. The purpose of the present study is briefly to outline the development of the sacred architecture of the great Hindu faith.*—Editor.

INDIA is above all a land of religion; two of the greatest religious systems of mankind were born on her soil—Hinduism and Buddhism. The former scarcely extended beyond the confines of India, but the latter, dying out in the land of its birth, spread to other countries and now counts many millions of devotees in Ceylon and Burma, Napal and Bhutan, Tibet, China, Japan and Siam. To these great and ancient faiths two smaller but by no means insignificant ones must be added—Jainism and Sikhism, neither of which ever spread beyond India. Jainism is as old, if not older, than Buddhism; but Sikhism arose as recently as the sixteenth century and is practically confined to the Punjab. Besides these characteristically Indian faiths there are in the country some 70 millions of Mahomedans, but Islam arose in Arabia, not in India. The religion of the vast majority of Indian peoples is Hinduism, a faith so complex and varied as to defy clear definition, but held in one or other of its many forms by no less than 216 millions of people. It is with the ancient architecture of this religion that the present article deals.

When the Aryan invaders entered India about the second millennium before Christ they brought with them a very simple faith. They tramped through the great passes of the Hindu Kush singing hymns in praise of their thirty-three nature gods.

They had no images, and when they first settled in the Punjab (" The Land of Five Rivers ") they built no temples; every man made a small altar and offered sacrifices for his own family. To them, the golden dawn was a goddess and the sun a mighty lord; the fierce storms, the intoxicating juice of the Soma plant, and the devouring fire were regarded as divine. Agni, the Fire God, came to be regarded as the messenger of the gods, and as the simple offerings of ghee, rice, cakes and soma-juice were thrown upon the sacred fire on the altar, the worshippers sang praise to him.

As the centuries passed and life became more settled and worship more organised, a regular priesthood arose and small temples were built. In all probability the earliest of these were fire temples in which the sacred fire was kept upon the altars. Of course none of them have been preserved; they were no doubt built entirely of wood—small square cells with a very high conical roof made of bamboos tied together at the apex and covered with thatch; a large earthenware pot would be inverted over the apex to keep out the rain. There has been a good deal of speculation as to the origin of that roof, many holding the view that it was merely an enlargement of the ordinary primitive dwelling, while some even trace its origin back to ancient Nineveh, where there have been found bas-reliefs showing buildings of very similar shape. When brick and stone came into use the old form would still be retained, the same essential design being carried out in the more durable material instead of in wood and thatch. Decorative ideas would develop and the little temples, still keeping to the original shape, would become increasingly ornate. Even today many small temples of this type may be seen all over North India. The high roof is termed a " sikhara." It is exceedingly likely that the earliest of these " sikhara " temples would be the royal chapels of Aryan chieftains and kings, and to this day in South India a temple is called a " Kovil " or King's House.

Just as the little Roman or Saxon churches of England were the embryos of our great Gothic and Renaissance cathedrals, so these early Aryan temples were the nucleus of the splendid temples still existing in North India. It is true that we have no very early examples of Hindu temples from which to draw assured facts as to the process of development; the oldest that have sur-

Photo by F. Deaville Walker.

VERY EARLY TYPE OF NORTH INDIAN TEMPLE

None of the earliest temples have been preserved; made of wood, a simple square cell covered by a high roof of bamboo and thatch, they soon perished. But when stone came into use the ancient form was still retained in more artistic guise.

Photo by the Rev. A. S. Hutchinson.

WITH INCREASING SKILL THE ROOF WAS MADE HIGHER

This high bulging roof is termed a "sikhara" and is characteristic of North India. As the builders became bolder it grew higher and as the masons increased in skill it became more ornate. These two temples are comparatively late, but they illustrate none the less the lines along which the early temples must have developed.

STEADY DEVELOPMENT IN SIZE AND STYLE

Just as the Saxon churches developed into our great Gothic cathedrals, so the simple temples of India grew into the magnificent shrines of which this, the Great Temple at Bhubaneswar, built about A.D. 617–57, is one of the most famous. There is still the cell, but mark how splendid the sikhara has become; the roof of the porch (on the left) has developed into a dome and smaller shrines shaped like miniature sikharas have gathered around.

vived are very fully developed, but it is evident that they have a long historic growth behind them.

Fortunately, we possess sufficient clues to enable us to determine with something like reasonable accuracy the main stages of development from the simple cube and roof shrines of primitive times to the magnificent temples of Bhubaneswar and Khajraho.

Broadly speaking, that development lay on the following lines: With the increasing skill of the Aryan builders the small square cell would grow larger and the " sikhara " tower higher. With the growth of ritual in Brahminical times the use of symbol increased; sacred books dealing with such matters were composed and ever-increasing emphasis was laid on the importance of ritual. Strict rules were laid down for the guidance of master builders; villages were to be arranged on certain definite plans and temples built so as to be symbolic expressions of theological or philosophic ideas. Thus, a temple to Vishnu (the Preserver) must face towards the rising sun and a temple of Siva (Lord of Death) must face towards the setting sun; a temple consecrated to the worship of Brahma (the Creator) must have a door on each of its four sides—images of Brahma always represent him as having four faces scanning the universe in all directions. And so it came about that the little square temple would be adapted to these conceptions, facing east or west or having four doors according as it was designed for the worship of Brahma, Vishnu or Siva.

As ritual developed the small square chamber of the little temple would come to be regarded with increasing reverence and awe. At first it was occupied by the altar on which offerings were thrown upon the sacred fire. Later, when images came into use, the image would take the place of the altar; the primitive fire temple would become an idol shrine and the presence chamber of the god, a veritable holy of holies into which priests alone might enter. The worshippers would remain without, viewing the image or symbol of the god only through the open doorway. This would naturally lead to an extension of the threshold from a mere doorstep into a prayer platform upon which the worshippers performed their devotions; and the development of this into a porch with a roof supported by pillars would only be a question of time.

While the master builders were growing more skilful and

more daring in construction, the masons were gaining experience in stone carving, and both temple and porch would become increasingly ornate. The great sikhara was gradually covered with ornament and in process of time miniature imitation sikharas began to cluster around it, purely for decorative effect. What in the early fire temples had been an inverted clay vessel covering the apex of the thatched roof was converted into a carved stone representation of a lotus flower with its petals turned down. The interior, too, from being a small cubical cell with bare walls, came to be decorated with mural carvings and an ornate dome appeared between the original square chamber and the great hollow sikhara.

The porch or "mandapam" also became more elaborate. The number of pillars supporting its roof increased from the original four, and from being plain columns they became elaborately carved monoliths. The first flat roof of the porch also underwent considerable development and adornment; the striving after artistic effect led to it taking the shape of a dome the internal decoration of which was often of great beauty. In some cases the porch was walled in, thus becoming an enclosed building instead of an open portico.

Then the development went a stage further. A stone terrace or platform appeared around the base of the temple, the temple and porch occupying the centre of it. This platform soon became higher and more elaborate and in some cases had a small but highly decorated shrine at each corner, built in the shape of small sikhara temples. Noble flights of broad steps led to the platform and then to the porch and the shrine. It will readily be seen that such a platform, by raising the temple, added immeasurably to its dignity, and in some of the temples of this type Hindu architecture reaches its climax of grace and beauty. It must not be supposed that all temples followed these exact lines of development—far from it. We have but attempted to indicate the general line of progress; the size, elaboration of style and decoration depended largely upon the wealth, devotion and tastes of the pious builder, who was usually impelled by a desire to acquire merit. Monarchs, rajas, nobles, and wealthy landowners built according to the means at their disposal.

Let us now visit two or three important temples of the sik-

Photo by F. Deaville Walker.

LATER DEVELOPMENT OF THE OLD DESIGN

While the builders kept to well defined styles they did not slavishly copy older work. This is the famous Teli-ka-mandir or Oilmans Temple at Gwalior (eleventh century A.D.) Notice the same essentials; but mark the increased height (80 feet) and elaborate decoration. The roof is unusual; instead of having a point for its apex it ends in a curious barrel-shaped ridge not unlike those on the "gopurams" of South Indian temples.

By permission of the Director and Secretary of the Victoria and Albert Museum.

GLORIOUS CLIMAX OF NORTH INDIAN ARCHITECTURE

At Khajurho in Bundelkhand there are twenty-eight temples that show the North Indian architecture fully developed. Notice the high plinth and the massing of miniature sikharas around the central one for purposes of decoration. The porch, too, has become very ornate. The whole group of temples dates from A.D. 950 to 1050, and this particular one, the Kandarya Mahadeva, is the largest of those dedicated to Siva. It is 109 feet long, 60 feet broad and 116 feet high, and in spite of its elaborate detail is exquisitely graceful.

From "Through Town and Jungle," by W. H. and F. B. Workman.

WHEEL OF THE SUN GOD'S CHARIOT AT KANARAK

Built about the middle of the thirteenth century, the Black Pagoda at Kanarak must have been a temple of great size and splendour. The huge pinnacle, which was probably 200 feet high, has fallen; but the porch, 138 feet high, remains. On both sides of the temple are wheels carved in stone. Evidently the whole building was designed to represent the Chariot of the Sun God.

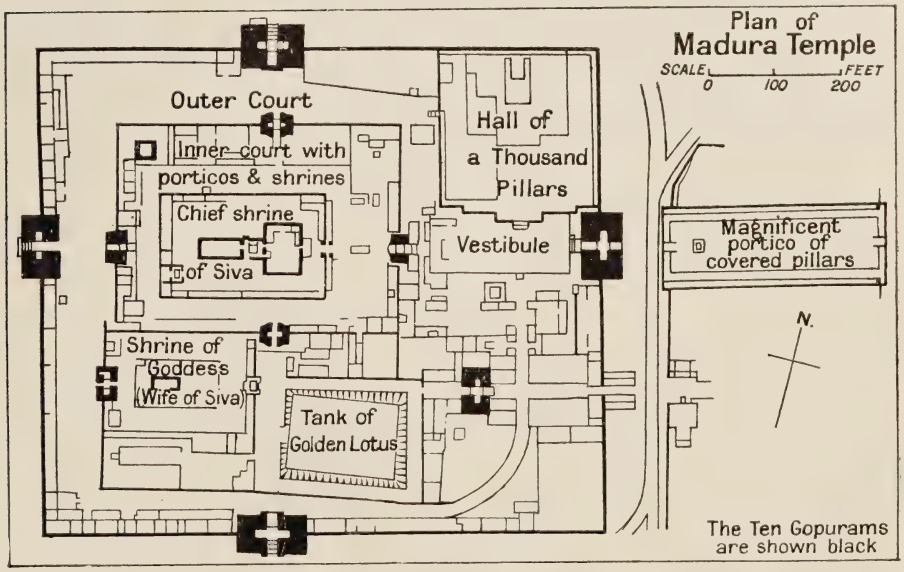


Photo by the Rev. J. P. Shrimpton.

THE STARTING-POINT OF SOUTH INDIAN ARCHITECTURE

This is Dharma Raja's Rath, one of the "Seven Pagodas" at Mamallapuram; it is hewn to represent a Buddhist "vihara" or monastery. It is important to notice how the roof (called a "vimana") rises in three terraces and is surmounted by a small dome. Here we have the embryo of all the great temples of South India; from this model they all developed.

hara type. Unfortunately, the finest examples are rather out of the beaten track and are seldom visited by the ordinary tourist or European resident in India. Mediæval and modern shrines of the simple cell and sikhara kind are fairly numerous; there are also many with the addition of the mandapam. The more highly developed temples of the best periods of Hindu architecture are all too rare. Many of them were destroyed during the Mahomedan invasions, and others, deserted for centuries, have fallen into ruin or have been despoiled by local landowners seeking stone for housebuilding.

One of the most remarkable groups of temples of the North Indian type we are considering is at Bhubaneswar in Orissa. It is said that at one time there were 7,000 temples and shrines encircling the sacred lane. To-day there are still several hundreds of them; most of them are in a state of decay, but they include valuable examples of temple architecture from the seventh to the thirteenth centuries, and illustrate the process of development. In the older ones the sikhara is low and rather stumpy and the porch is a walled-in chamber rather than an open pillared one. These old buildings are remarkable for their massive dignity. A second period is characterised by a very high sikhara with sides that are almost straight until they curve in near the top. Yet a third period is represented at Bhubaneswar by temples of a highly decorated order, the stone carving being of very fine quality. One very notable feature is the clever blending of horizontal and perpendicular lines in the structure and decoration of these temples. One of the Bhubaneswar temples, known as the Great Temple, has been described by Ferguson as " perhaps the finest example of a purely Hindu temple in India." It is said to have been built about 617-657 A.D., but two additional mandapams were added about the end of the eleventh century. The great sikhara of this splendid temple is 180 feet high and every inch of it is covered with most elaborate carving.

The province of Orissa has other examples of this style of architecture, notably the famous Black Pagoda at Kanarak. It has been long deserted, and unfortunately the great sikhara has fallen. The porch, however, remains complete and is of a very large size, being some 138 feet high. Probably the height of the sikhara was nearly 200 feet. The stones are very large and must

have been brought thirty miles; it must have been a stupendous task to lift them to the height of 100, and in some cases, to nearly 200 feet from the ground. When complete, this great temple must have been unusually finely proportioned and the carving on the porch is superb. It has one very unusual feature; on either side of the plinth of the fallen sikhara there are magnificently carved stone wheels; apparently the whole temple was designed to represent the chariot of the Sun God. The Black Pagoda dates from about the middle of the thirteenth century.

Another example is to be seen on the summit of the rock fortress of Gwalior, where only the mandapam remains of what must have been a temple of great size and beauty. It is known as the Sas Bahu temple and it dates from 1093 A.D. Of the sikhara only the foundations remain, but the porch is in a very good condition, and is in three storeys reaching a height of about 100 feet. The central chamber rises to a finely carved dome constructed of overlapping stones in concentric circles. Another very important group of temples is at Khajraho, the old capital of the Chandola dynasty in Bundelkhand. They number twenty-eight, and from inscriptions it is clear that they were all built in the space of a century, about 950 to 1050 A.D. They are a later development of the style we are considering, and much more complex than the earlier examples. Small decorative sikharas and domes are clustered around the large ones to give effect, and they are very ornate, the stone carving being exceedingly lavish. These temples stand upon high plinths, and some of them are further raised upon large terraces with smaller shrines around. These Khajraho temples are the more interesting in that they belong to both the Vaishnava and Saiva sects of Hindus and also to the Jains, a fact which suggests the toleration of the century during which they were constructed.

South India is famous for temples of a design totally different from those of the north and these we must now examine. Archæologists are divided as to the names which should be used to differentiate these two classes, but for the purposes of this article it will be less confusing for the uninitiated reader if we use the simple terms " Northern " and " Southern," for these two great architectural styles may be broadly so distinguished, though to some slight extent they overlap.

GALLIA
RHAETIA
NORICUM
PANNONIA
DACIA
Padus
Verona
Genua
Pisae
POLA
Danubius or Ister
Tibiscus
Porata
Sirmium
Singidunum (Belgrade)
Noviodunum
ITALIA
Tiberis
Adriaticum Mare
ILLYRICUM
CORSICA
Alema
ROME
OSTIA
TIVOLI
Danubius or Ister
MOESIA
Olbia
Neapolis
POMPEII
PAESTUM
Dyrrhachium
Axius
Hadrianopolis (Adrianople)
Apolloni
SARDINIA
Caralis
Tyrrhenum Mare
Brundusium
Tarentum
Corcyra
EPIRUS
MACEDONIA
THRACIA
Thessalonica
Chalcidice
BYZANTIUM (Constantinople)
Chersonesus
MYSIA
TROY (Hissarlik)
SICILIA
PANORMOS (Palermo)
DREPANUM (Trapani)
CARTHAGE
SEGESTA
HIMERA
MESSANA (Messina)
NAXOS
Aegaeum Mare
PERGAMUM (Bergama)
LYDIA
Sardis
Smyrna
EPHESUS
LILYBAEUM (Marsala)
SELINUS (Selinunte)
AKRAGAS (Girgenti)
GELA (Terranova)
LEONTINI (Lentini)
SYRACUSA
Zama
Hadrumentum
THYSDRUS (El Djem)
GOZO
MELITE (MALTA)
DELPHI
Thebes
ELEUSIS
ATHENS
CORINTH
MYCENAE
OLYMPIA
Argos
Sparta
ACHAIA
CARIA
HALICARNASSUS (Budrum)
RHODOS (RHODES)
Tacape
Hagia Triada
CNOSSUS
Phaestus
Palaikastro
CRETA
AFRICA
Oea
Leptis Magna
Syrtis Major
Berenice
Cyrene
Cyrenaica
Catabathmos
LIBYA
AEGY
Oasis Jovis Aminonis
IMPORTANT SITES OF
ANCIENT CULTURE
IN MEDITERRANEAN LANDS
English Miles
0 50 100 200 300

MODERN POLITICAL BOUNDARIES COMPARED WITH DIVISIONS IN ANCIENT TIMES
English Miles
0 100 200 300 400
RHAETIA
NORICUM
AUSTRIA
HUNGARY
PANNONIA
DACIA
RUMANIA
UKRAINE
RUSSIA
FRANCE
ITALIA
YUGO-SLAVIA
ILLYRICUM
ALBANIA
MOESIA
BULGARIA
THRACIA
MACEDONIA
BLACK SEA
GEORGIA
CASPIAN SEA
AZERBAIJAN
ARMENIA
Corsica
Sardinia
Sicily
SICILIA
TUNIS
MEDITERRANEAN SEA
GREECE
ACHAIA
BITHYNIA
MYSIA
GALATIA
PAPHLAGONIA
LYCIA
CARIA
PAMPHYLIA
CAPPADOCIA
CILICIA
TURKEY
ASSYRIA
MESOPOTAMIA
PERSIA
SYRIA
IRAK
BABYLONIA
Crete
Cyprus
PALAESTINA VEL JUDAEA
PALESTINE
KERAK
ARABIA PETRAEA
HEJAZ
ARABIA
KOWEIT
LIBYA
EGYPT
AEGYPTUS
ALGERIA
Tanais (Don)
Borysthenes (Dnieper)
Chersonesus
Hypanis
Eupatoria
Phanagoria
NTUS EUXINUS
Sinope
Trapezus
Paphlagonia
Halys
GALATIA
BOGHAZ KEUI (Hattusas)
CAPPADOCIA
Artaxata
ARMENIA
Cyrus
CASPIUM MARE
Araxes
Cyropolis
Tigranocerta
Atropatēnē
KONIA
CILICIA
Tarsus
SENJERLI
CARCHEMISH (Jerablus)
MESOPOTAMIA
NINEVEH
NIMRÛD
KHORSABAD
ASSYRIA
Adiabene
Arbela
Ecbatana
BEHISTUN
ALEPPO
Antiochia
Nicephorium
SYRIA
Tigris
Salamis
Paphos
CYPRUS
PALMYRA
Euphrates
CTESIPHON
BAALBEK
Damascus
Seleucia
BABYLON
SUSA
SUSIANA
SIDON (Saida)
TYRE (Es Sur)
PALAESTINA OR JUDAEA
JERUSALEM (Hierosolyma)
BABYLONIA
UR
Pelusium
Bubastis
HELIOPOLIS
PETRA
ARABIA PETRAEA
Sinai
ARABIA
Persicus Sinus
Nilus
35
40
45
50

At Mamallapuram, on the sea coast some thirty-five miles north of Madras, we have what are known as the "Seven Pagodas," a group of very small temples that are absolutely unique in India. Thanks to well-preserved inscriptions we know that they were constructed in the seventh century by the Pallava kings. They were not built, but hewn from huge boulders and masses of rock that lie around. This fact alone would give them distinction; but they have a still greater importance. We may regard this place as the cradle of South Indian architecture, for from these small rock-hewn shrines have developed those vast and world-famed temples of the Tamil country.

These Seven Pagodas are, and always have been, dedicated to Hindu gods; but in architectural style they are copies of earlier Buddhist buildings. Nothing is more certain than that South Indian temple architecture has developed from Buddhist models. The Buddhists had two kinds of buildings "chaityas" or chapels and "viharas" or monasteries. In early Buddhist ages both were built of wood or hewn out in the rocks (see pages 433 to 443), then similar ones were built of stone; but the same general designs were adhered to. At Mamallapuram we find those little Hindu temples hewn in the precise forms of Buddhist chaityas and viharas. The chaitya was an oblong structure with a horse-shoe-shaped gable at one end and a semicircular apse at the other, the roof itself being a sort of barrel. A careful study of the accompanying photographs will show that the main decorative device in these Mamallapuram temples is a row of miniature chaityas which occurs as frieze and parapet, while the roof is decorated by miniature horse-shoes in imitation of the gable end of the chaitya —just as in the North Indian temples the great sikharas were decorated with clusters of miniature sikharas. Let us particularly notice the vihara-like temple known as Dharma Raja's Rath. Mark the way the roof rises in three tiers or terraces to a small dome; and notice also that each storey is encircled with imitation chaityas. A roof so formed is called a Vimana. This temple is the embryo of the architectural style we are now dealing with.

With the photograph of this little rock-hewn temple before us, let us travel to Conjeeveram, the Benares of the south and one of the seven most sacred cities of India. Outside the town there

stands a small but venerable Hindu temple that forms the next stage in the development we are tracing. It is called the Kailasanatha and like the "Seven Pagodas" was the work of the old Pallava kings. Here again we are on safe ground, for numerous inscriptions on the walls and pillars give clear information as to founders and building dates. This temple was built, not hewn out of rock. It is also very much larger and more developed than its prototype at Seven Pagodas. Notice that the vimana roof has risen from three tiers to four and the terraces have contracted; but the decorations still consist of imitation chaityas. Observe, however, the development of a large walled-in porch in front. Another sign of growth is the surrounding courtyard enclosed by rows of fifty-nine small cells; this feature once caused the Kailasanatha to be regarded as of Jain origin, a notion now proved to be erroneous. There is yet another feature to be noted—the very small tower over the entrance; this was the embryo of the huge gate towers of later centuries. This temple, and six smaller Pallava temples in Conjeeveram, form the connecting link between the little vihara shrine at Mamallapuram and the great South Indian temples.

As the architects became more skilful they became more daring, and the vimana grew higher and higher until it reaches its climax in the wonderful temple of Tanjor, where the majestic vimana rises in thirteen storeys to a height of 190 feet—the greatest triumph of Dravidian architecture. Only those who have seen this glorious creation can realise its dignity and beauty. To add to the effect, the surrounding courts and halls have been kept low and the stately pyramidical vimana rises unchallenged into the sky, casting no shadow at midday. It was begun about the end of the tenth century and completed about 1012 A.D. to commemorate the victories of the Chola King Rajaraja I. Sculptured chaityas still form the chief feature of decoration. Compare the photo of this temple with that of a North Indian sikhara, and the essential difference is immediately apparent. But Tanjor is unusual. The South Indian temple ordinarily developed on quite another line. In most instances the vimana remained low and the square chamber that formed the holy of holies remained comparatively small; mandapams and new courts were added by succeeding monarchs, the surrounding walls increasing in height

Photo by F. Deaville Walker.

PEERLESS SCULPTURE OF INDIAN CHISELS

One of the glories of Madura is its famous "Hall of a Thousand Columns" where each pillar is carved from a single block. Unfortunately, these colonnades are covered with flat slabs, and we miss the soaring vaults of the great Gothic aisles. The Indian architects have no interior effects comparable with the naves of Lichfield or Winchester.

Photo by F. Deaville Walker.

TANK OF THE GOLDEN LOTUS AT MADURA AND ITS WONDERFUL SURROUNDINGS

All the great temples have a sacred tank in which the worshippers bathe as a part of their devotions. This photograph was taken in the afternoon when very few were about. In the mornings the colonnades and steps are full of life, and at times of festival the whole temple is crowded with thousands of pilgrims who come from all parts of South India. The water is filthy to a degree, yet the worshippers bathe in it and are even known to drink it. In the background are seen two of the great "gopurams."

Photo by F. Deaville Walker.

PRANCING STEEDS IN LIVING STONE

A feature of some Hindu temples is their wonderful open-air porticoes, each pillar of which is carved from one stone. The above view is very characteristic; and there are many such porticoes in South India. This one is in the Vishnu temple on the Isle of Srirangam in the Kavari River. It is the largest temple in India—perhaps in the world—for its outer wall forms an immense square over two miles in circumference, and it has in all sixteen great gopurams or gate towers.

Photos by F. Deaville Walker (top), and by permission of the Director and Secretary of the Victoria and Albert Museum.

TRIUMPHS OF HINDU ART AT TANJOR AND CONJEEVERAM

Upper photograph: This is not a shrine, only a gate tower or "gopuram." In the south, these towers grew steadily bigger and the great temples have a number of them, ranging from about 70 to 200 feet high; this one is at Great Conjeeveram. Below: In the splendid Tanjor temple the vimana, 190 feet high, has increased to no less than thirteen storeys. The surrounding buildings have been kept low so that this great tower should dominate all. It is the greatest triumph of South Indian temple architecture.

and the gate towers growing higher and more ornate until they became the dominating feature.

There are many temples of this character in South India, some of them being of enormous size. A good example is the temple of Siva at Madura, which is more than a mile in circumference and twenty-five acres in extent. It has ten gate towers ranging from about 100 to 200 feet high. The temple forms an immense square and has a gate tower in the centre of each outer wall. The courts are one within another, and each is entered by gateways surmounted by towers. These gate towers are called "gopurams." At the base they are oblong and they rise in many storeys to a ridge, not to a point or a dome like the vimana. They are lavishly decorated, the older ones with sculptured chaityas and the later with innumerable figures of gods and goddesses, sometimes done in stucco and gaudily painted.

The writer once bribed the priests to allow him to ascend to the top of one of the gate towers of Madura. It was an unpleasant climb, for it had to be undertaken without shoes; the stone staircases were dark and dirty and were infested with bats who resented the sacrilegious intrusion. At last the top was reached, and sitting in a sort of man-hole we looked down upon the labyrinth of courts and colonnades, bathing tanks and cloistered halls, towers and shrines. The vimanas over the shrines of the chief god (Siva) and the goddess (Minakshi), being overlaid with gold, glittered in the sunlight. One characteristic feature is the "Hall of a Thousand Columns" (the actual number is 985), each column being cut from a single block of stone and wonderfully carved. They are arranged in rows and present remarkable vistas of aisles with light and shade playing among the pillars.

The largest (but not the finest) of these great Dravidian temples of South India is that of Srirangam, on an islet in the Kaveri River. Its outer wall is over two miles round, and the temple has sixteen gate towers. These vast shrines resemble sacred towns rather than ordinary temples; they are in fact, cities of the gods, having bazaars and streets of houses for the priests and temple attendants. North India has nothing at all resembling them, save the very modern temple of Rangunath at Brindaban—obviously a feeble copy of the southern temples.

There is yet another type of South Indian architecture to which we may briefly refer as being in the " Hoysala " style, because it was the work of the Hoysala kings. Some authorities, however, prefer to speak of it as the Mysore style, because it is found chiefly in and around Mysore State. The three finest examples are at Belur, Somnathpur, and Halebid—all in Mysore territories.

In plan and general style these three temples differ from all the others we have considered. The temples themselves are small star-shaped cells, surmounted with high circular roofs more like the sikharas of the north than the vimanas of South India. They have vestibules, and the whole stands upon an elegant platform with surrounding courts. In arrangement they differ considerably, Halebid being a double temple (having two central shrines side by side) and Somnathpur triple. Happily it is possible to assign exact dates to each; Belur, according to the inscriptions, being completed by 1117 A.D., and Somnathpur by 1270 A.D. Halebid was still unfinished when the Moslem invasion of 1311 A.D. made further work impossible.

These three Hoysala temples are noted chiefly for their wealth of decoration; they may be not unjustly regarded as the Flamboyant of Indian architecture. No part of the structure is without decorative features, and not a fragment of stone is left uncarved. "The architectural framework," says Vincent Smith, " is used mainly as a background for the display of an infinity of superb decoration which leaves no space uncovered, and gives the eye no rest." The labour must have been immense. One sculptured frieze at Halebid is 710 feet long and contains about 2,000 carved elephants.

This all too brief account of Hindu architecture will, it is hoped, at least serve to show the skill and originality of Indian craftsmen, and also something of their earnestness of purpose and devotion to the gods they worshipped.

APPENDICES

APPENDIX I

SYNCHRONISED TABLE OF EVENTS

WE give here an illustrative chart of the main tendencies of Ancient History, presenting these in their chronological order and in their proper positions relative to the appropriate chapters in WONDERS OF THE PAST. *The gamut of the chart lies between the most remote prehistory and* 600 A.D., *and there are, therefore, of necessity certain chapters outside this compass; a list of these is appended at the end. The dates given in the first column are of course, approximate.*

B.C.	Asia and Africa	Europe and America	Chapter in this Work	Page
50,000 to 20,000		Late Palæolithic Age in Europe.	Master Artists of the Stone Age	755
			Prehistoric Rock Carvings of the British Isles and Brittany	901
4,000	Early pottery of the Elamites.		Susa: The Eternal City of the East	579
	Predynastic kings in north and south Egypt—Agriculture introduced—Copper Age.		The Story of Agriculture as Pictured on the Monuments	701
	Sumerian city states (Lagash, etc.) in Mesopotamia.		Ur of the Chaldees	381
3,000	Hittites in north Mesopotamia, rise of BoghazKeui—Wars with Babylonia.		The Hittites: Vestiges of a Vanished Empire	857
	South Mesopotamian kingdom of Akkad founded by Semites (Sargon of Akkad). Early foundations of Ashur.		The Arts in Babylonia and Assyria	507
		Early Minoan civilisation in Crete—Influence of Egyptian metal ware.	Marvels of the Potter's Art. 1. In Mediterranean Lands	423
			The Palace of Minos at Cnossus	55
2,500	3rd Dynasty of Egyptian kings—Art of the country begins to express itself—Age of the Pyramid builders.		The Exquisite Artistry of Ancient Egypt	211
			The Gods of Ancient Egypt	153
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	Apex of Egyptian Art in 4th dynasty—Sphinx hewn about this time.		The Sphinx	445
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		Transition from Neolithic to Bronze Age in north-west Europe.	The Stone Age Marvels of Malta	713
	End of Old Kingdom in Egypt.		The Wonder Stones of Carnac and Stonehenge	649
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	Period of transition in Egypt.			
	Thebes seat of power in Egypt—Middle Kingdom.		The Pyramids of Egypt	365
	Reign of Hammurabi in Babylon—His victorious conquests and his code of laws.		The Arts in Babylonia and Assyria	507
2000	12th Dynasty—End of Middle-Kingdom in Egypt.	Middle Minoan period of Cretan civilisation.	500 Years Before Tutankhamen	63
	Ægean civilisation in Second City of Troy.		Troy: The City Sung by Homer	973
1,750	Great Power of Hittites—Descent on Babylon.		The Hittites: Vestiges of a Vanished Empire	857
		Pre-Hellenic civilisation of Mycenæ—the influence of Cretan civilisation.	Golden Mycenæ	721

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			The Valley of the Tombs of the Kings	133
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			Tell-el-Amarna: City of Akhnaton and Tutankhamen	1047
			Tutankhamen and his Treasures: 1. First Fruits of a Great Discovery	33
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			The Wonder of the Mummy	325
		Late Minoan period of Cretan civilisation.	The Palace of Minos at Cnossus	55
	Period of Assyrian expansion.		The Arts in Babylonia and Assyria	507
	Beginnings of Phœnician power in Tyre and Sidon.		Tyre and Sidon: Cities of Phœnicia	983
	19th Dynasty in Egypt—Rameses II—Iron Age—Battle of Kadesh: Rameses meets Hittites—disastrous for both.		The Rock Temples of Abu-Simbel	375
			The Hittites: Vestiges of a Vanished Empire	857
1,250	Period of Assyrian expansion.		The Arts in Babylonia and Assyria	507
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1,000	Hittites subject to Assyria—remnants of their culture now in Carchemish.		Carchemish of the Hittites	557
	Nubian independence from Egypt.	Beginnings of Dorian civilisation in Greece.	The Gods of Ancient Greece	267
	Civilisation of Israelites in Palestine—King Solomon.		The Temples at Jerusalem	1069
800	Period of greatest Assyrian splendour—Iron introduced from Hittites—Sennacherib and Ashurbanipal.	Native civilisation of Greece supplants Mycenean culture—Early geometric pottery—Great period of Greek colonisation.	Splendours of Nineveh and Khorsabad	243
			Marvels of the Potter's Art. 1. In Mediterranean Lands	423
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700	Rise of Babylonia to zenith of its power—Great building period of Nabopolassar and Nebuchadrezzar.		Babylon the Great	309
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	The great shrine builders of Ceylon.		The Great Dagobas of Ceylon	1027
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APPENDIX II

KINGS AND DYNASTIES OF ANCIENT EGYPT

FIRST, with regard to chronology. Working backwards in time the historian can fix the dates with errors of not more than a year or two as far as the beginning of the eighteenth dynasty; and before that period kings and the lengths of their reigns are known but for two anarchical periods which have left few monuments and which most extant records ignore. In other words, relative intervals are known with tolerable certainty, and the whole system could be fixed if only the numbers of years which elapsed between the twelfth and eighteenth and between the sixth and eleventh dynasties could be definitely ascertained. However, the dates here adopted (approximately the "Minimum System") are those which recent research tends more and more to confirm, although in the case of the earlier dynasties about 200 years could be added without actually violating possibility.

Secondly, with regard to names and their spellings. On their accession Egyptian kings took one or more ceremonial names, but it is by their personal names that they are referred to generally and in the following list. Only in the earliest dynasties, where the personal names either are not known or have been recently discovered, are the "Horus-names" given; but the personal name is added where possible, as both are sometimes in use. The spellings are those adopted in the body of this work, and names not already referred to are made to conform in principle—it is the vowels, not written in hieroglyphics except in certain cases, which

cause uncertainties. Variants are given in brackets when very well known, or when an erroneous name has been hallowed by use.

Thirdly, with regard to dynasties. This scheme was first adopted by Manetho, the Græco-Egyptian historian, and besides being convenient seems to conform to ascertained facts. Manetho, in fact, was probably an accurate authority, but his text has suffered badly and has to be carefully checked by early king-lists on discovered monuments, themselves not necessarily reliable. The first dynasty has sometimes been regarded as mythical; this, discoveries prove not to be so, except in so far as the "Menes" of Manetho may be a composite personality formed of the first three kings, while his "foundation" of Memphis should, perhaps, be read as a transference of the government thither from This by Merpeba.

Predynastic Kings.

Before the first dynasty there were two kingdoms; some half-dozen names of kings of the North and kings of the South have been deciphered from the "Palermo Stele" (fifth dynasty) and others.

1st Dynasty.

Circa 3400–3200 B.C.

Southern conquerors of the North and unifiers of Egypt. Memphis made the capital instead of This.

The "Scorpion," Ip
Narmer
Aha, Men. Menes?
Zer, Atoti (Khent)
Za (Ata)
Den, Semti
Enzib, Merpeba
Semerkhet, Hui (Shemsu)
Ka, Sen

2nd Dynasty.

Circa 3200-2980 B.C.

A southern dynasty, probably with northern sympathies.

Hotep-sekhemui
Raneb, Kakau
Neneter
Perenmaat
Peribsen
Senedi
Neferka-ra
Neferka-sokari
Huzefa

3rd Dynasty.

Circa 2980–2900 B.C.

New conquerors from the South.

Khasekhemui, Besh (Bebi)
Zeser (Tcheser)
Sanekht
Zeserteti
Sezes
Neferka, Huni
Sneferu

4th Dynasty.

The great pyramid builders; zenith of the "Old Kingdom" in power and art.

Shura (?) . . 2900-2898 B.C.
Khufu (Cheops) . 2898–2875 "

Razedef . .	2875–2867	B.C.
Khafra (Chephren)	2867–2811	"
Menkaura (Mycerinus) . . .	2811–2788	"
Shepseskaf (and perhaps others) .	2788–2755	"
(Thamphthis?) .	2755–2750	"

5th Dynasty.

Northern kings from Heracleopolis; prominence of Ra-worship; decline slowly commences.

Userkaf . . .	2750–2743	B.C.
Sahu-ra . . .	2743–2731	"
Neferirika-ra . .	2731–2730	"
Shepseska-ra . .	2730–2723	"
Khanefer-ra . .	2723–2722	"
User-en-ra . .	2722–2691	"
Menkau-heru . .	2691–2683	"
Dedka-ra, Isesi .	2683–2655	"
Unis	2655–2625	"

6th Dynasty.

Chiefly notable for the long and peaceful reign of Pepi II.; central power of the Pharaoh steadily waning.

Teti . . .	2625– ?	B.C.
Userka-ra, Ati .	? –2595	"
Pepi I. . . .	2595-2574	"
Meren-ra I. . .	2574–2570	"
Pepi II. . . .	2570–2476	"
Meren-ra II. . .	2476–2475	"
Neterka-ra . .	2475– ?	"
Menka-ra . .	? –2463	"

7th, 8th, 9th and 10th Dynasties.

2463–2160 B.C.

Here follows the first period of anarchy; two dynasties ruling at Heracleopolis appear to be the most important, but how far they were contemporaneous with other princes ruling elsewhere whose names are recorded is uncertain. The country was split up and when centralised power (the "Middle Kingdom") reappears with the eleventh dynasty Thebes in the south is its seat.

11th Dynasty.

From Thebes. Intef I. was the first to assume the royal title and Mentuhotep I. to conquer all Egypt.

Intef I. . . .	2160– ?	B.C.
Intef II. . .	?	"
Mentuhotep I. .	?	"
Mentuhotep II. Nebhapetra . .	? –2078	"
Mentuhotep III. .	2078–2030	"
Mentuhotep IV. .	2030–2000	"

12th Dynasty.

Dates are given from the death of the father, although the son in this dynasty was frequently admitted as co-regent.

Amenemhet I. .	2000–1970	B.C.
Senusret (Usertsen, Sesostris) I. .	1970–1935	"
Amenemhet II. .	1935–1903	"
Senusret II. . .	1903–1887	"
Senusret III. . .	1887–1849	"
Amenemhet III. .	1849–1801	"
Amenemhet IV. .	1801–1792	"
Sebekneferu-ra (Queen) . .	1792–1788	"

13th, 14th, 15th, 16th and 17th Dynasties.

1788–1580 B.C.

Here follows the second anarchical period, with Thebes losing power and invaders coming from the east. Finally two dynasties of foreign Hyksos or "Shepherd" kings rule practically all Egypt until a Theban prince again emerges victorious and founds the "New Kingdom" or "Empire."

18th Dynasty.

Thebes the seat of power; climax of Egyptian greatness; Ammon-wor-

ship pre-eminent. The early reigns are obscure, but apparently Thothmes I. was deposed by his son, usually called Thothmes III., who in his turn was deposed by the short-lived Thothmes II. It was on the latter's death that Thothmes III. completed the bulk of his long reign, for some years, however, dominated by the vigorous Queen Hatshepsut owing to her royal descent from Aahmes.

Aahmes (Ahmose, Amasis) . .	1580–1557	B.C.
Amenhotep (Amenophis) I. . .	1557–1541	"
Thothmes (Thutmose) I. . . .	1541-1501	"
Thothmes III. .	1501–1496	"
Thothmes II. . .	1496–1493	"
Hatshepsut (Queen)	1493–1483	"
Thothmes III. .	1483–1447	"
Amenhotep II. .	1447–1420	"
Thothmes IV. .	1420–1411	"
Amenhotep III. .	1411–1375	"
Akhnaton (Amenhotep IV.) . .	1375–1358	"
Smenkhara (Sakere)	1358	"
Tutankhamen . .	1358–1353	"
Ay (Ai) . .	1353–1350	"

19th Dynasty.

A fresh period of power after the temporary confusion occasioned by Akhnaton and his heresies.

Horemheb (Harmhab) . . .	1350–1315	B.C.
Rameses I. . .	1315–1314	"
Seti (Sethos) I. .	1314–1292	"
Rameses II. . .	1292–1225	"
Merenptah . .	1225–1215	"
Amenmeses . .	1215	"
Sa-ptah . . .	1215–1209	"
Seti II. . . .	1209–1205	"

20th Dynasty.

After a short period of anarchy, during which Arsu, a Syrian usurper, reigned for some years, order was restored by Setnekht, of the family of Rameses II.

Setnekht . .	1200–1198	B.C.
Rameses III. . .	1198–1167	"
Nine more kings named Rameses .	1167–1090	"

21st Dynasty.

1090–945 B.C.

The last few kings of the twentieth dynasty were mere nonentities in the hands of the priests of Ammon; and on the death of Rameses XII. Her-Heru, the high priest, seized the power, founding the line of "Priest Kings." In the meantime, however, a prince of Tanis in the Delta assumed independent royalty—Nesu-ba-nebtet, the Smendes of Manetho; and during this period sometimes a Tanite king practically ruled the whole land, generally Thebes with its theocracy maintained a precarious independence, and on one occasion at least a high priest obtained the Tanite throne by marriage. General decline of power and prosperity.

22nd Dynasty.

The old order is definitely at an end; the founder of this dynasty was a descendant of Libyan mercenaries who had made themselves powerful in Heracleopolis. Bubastis was chosen as the capital, Egypt united and a large measure of foreign power regained.

Shashank (Shishak) I.	945–924	B.C.
Osorkon I. . . .	924–895	"
Takeleth I. . .	895–874	"
Osorkon II. . .	874–853	"

Shashank II. (co-regent) . . .	d.877 B.C.
Takeleth II. . .	853–834 "
Shashank III. . .	834–784 "
Pamai . . .	784–782 "
Shashank IV. . .	782–745 "

23rd Dynasty.

The last Libyan kings were practically confined to Heracleopolis and Thebes; soon a new Bubastite dynasty (the twenty-third) arose, but by this time almost every town had a petty chief.

Peta-bast . . .	745–721 B.C.
Osorkon III. . .	721– ? "
Takeleth III. (at Thebes only) . .	? –718 "

It was during Osorkon's "reign" that a prince of Sais, Tafnekht, acquired power, and so provoked the invasion of the Nubian king Piankhi, who conquered the whole country and retired to Nubia.

24th Dynasty.

718–712 B.C.

On the departure of Piankhi Bocchoris, the son of Tafnekht, ruled at Sais. A revival of art, if not of power.

25th Dynasty.

Shabaka, son of Piankhi, now founded the "Ethiopian" dynasty.

Shabaka . . .	712–700 B.C.
Shabataka . . .	700–688 "
Taharka (Tirhakah)	688–663 "

26th Dynasty.

In the reign of Taharka Egypt was subdued by Esarhaddon and Ashurbanipal, successive kings of Assyria. Taharka finally retired to his kingdom of Nubia and after some revolts and disturbances Ashurbanipal established Psammetichus at Sais. During this dynasty there was a brilliant revival of art and a last flash of military energy.

Psammetichus (Psamtek) I. . .	663–609 B.C.
Necho . . .	609–593 "
Psammetichus II. .	593–588 "
Hophra (Apries) .	588–569 "
Aahmes (Amasis) II.	569–525 "
Psammetichus III. .	525 "

27th Dynasty.

525–420 B.C.

Egypt conquered by Cambyses and ruled by Persian kings who assumed the old titles.

28th, 29th, 30th and 31st Dynasties.

420–332 B.C.

Evanescent princes who succeeded in regaining some independence from time to time; Nectanebo II., of the 30th dynasty, was Egypt's last native king. Finally the Persians regained complete control of the country in about 340 B.C.

The Ptolemies.

332–30 B.C.

In 332 B.C. Alexander the Great defeated Darius III., and his successors the Ptolemies, among whom was Cleopatra (51-30 B.C.), ruled Egypt from Alexandria for some 300 years. Finally in 30 B.C. Egypt became a Roman province.

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